

MARINE RECORD

ESTABLISHED 1878.

VOL. XIX, No. 13.

CLEVELAND---MARCH 31, 1898---CHICAGO.

\$2.00 Per Year. 10c. Single Copy

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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LAKE CARRIERS' ASSOCIATION MEETING.

A meeting of the executive and finance committees of the Lake Carriers' Association was held at the office of James Corrigan, Cleveland, Monday afternoon. President J. S. Dunham, of Chicago, Secretary Charles H. Keep and Capt J. J. H. Brown, of Buffalo, were present. The committee appointed at the last meeting of the association to go to Buffalo to try and make a settlement in the grain handling contract fight made a report. The committee was unable to accomplish anything. The matter was thoroughly discussed and at the suggestion of President Dunham, H. D. Goulder, Esq., counsel for the association, was instructed to go to Buffalo and try and get the elevator managers and contractor Connors together on terms. Mr. Goulder was given power to make any settlement that he considered fair for the vesselmen.

With the large amount of grain that will pour into Buffalo at the opening of navigation there will be much time lost by vessels with the best possible dispatch, and vesselmen are anxious to get the fight over the handling contracts settled before the boats make a start. All the members of the association will stand by contractor Connors. The general opinion is that Mr. Goulder will be successful in making a settlement and that concessions will be made by all parties interested. Applications for membership in the association are coming in more freely than in former years and the tonnage of the association will be larger this year than it has been at any time since its organization.

THE DEEP WATERWAY TO THE COAST.

The deep waterway to the coast problem is still receiving attention, and some alarm has been felt of late over the apparent attempt made by certain New York interests in their efforts to transfer the Erie canal over to the Federal govern-

ment. It was thought this would head off the movement for a deep water canal from the Great Lakes to the ocean as it is proposed to have the Erie canal enlarged and deepened sufficiently to admit of barges larger than the present canal boats, but not sufficiently so to allow the passage of ships of the largest size. As the matter now rests, the grain interests of the northwest contend that if the government takes over the Erie canal, it should take it with the understanding that it be made a genuine deep waterway. If it is to remain only a canal for canal boats then New York state should keep it.

REPORT ON THE NICARAGUA CANAL.

The government commission sent to Nicaragua late last year to survey the route of the proposed Nicaragua canal and report on the practicability and cost of the scheme has completed its work and the report of the investigation will soon be submitted to Congress. It is understood that the commission will report favorably and place the estimated cost at \$100,000,000. The friends of the project will introduce bills in the House and Senate based on the recommendations of this report.

THE LUMBERCARRIERS' ASSOCIATION.

The newly formed Lumber Carriers' Association has now enrolled a net tonnage of 69,830 on the books of the organization and the secretary reports more vessels coming in every day. There is a total of 68 members, a number of which report quite a large fleet, as, for instance, C. R. Jones, Cleveland, five steamers, and eight barges, Runnells & Sinclair, two steamers and five barges. James Davidson, F. W. Gilchrist, C. A. Chamberlain, Hope Transportation Co., J. A. Crosthwaite and La Salle & Co., are among the list of well known vessel owners, agents and brokers who have already enrolled their tonnage.

The Longshoremen's Union have signified their intentions of using their best efforts to maintain the association rates and there is no doubt but that they form one of the strongest combinations that could be antagonized by any of the vessel owners, either members or otherwise.

THE NEW CANADA-ATLANTIC LINE.

The prospects of an early opening of navigation on the lakes has hurried the preparations for the new Canada-Atlantic line, the latest lake and rail route to the seaboard. The big warehouse which is being built for the line just east of the Illinois Central railroad bridge at Chicago, is nearing completion, and the work of overhauling the steamers Roman, Briton, Saxon, German, and Grecian, which are being transformed into general cargo steamers, is being rushed.

The boats of the line will ply between Chicago and Duluth and Parry Sound and Georgian Bay. There the freight will be transferred to the Canada-Atlantic railway and unloaded at a point just a short distance above Montreal. From that place river barges will take the freight alongside the ocean steamers at Montreal.

A shorter haul, both by lake and by rail, is claimed for the new line. In addition the new route has connections to Boston, New York, and Halifax, and the Chicago agent, George Harris, asserts that the Canada-Atlantic will claim its share of west-bound business, as well as east-bound grain and flour.

The harbor at Parry Sound, Georgian Bay, has a depth of twenty feet. The new steamer William R. Linn has been chartered for her first cargo by the line and it is said will load nearly to that depth. If the Linn does load to 20 feet, which at this time seems problematical, it will be the first time that a draft of 20 feet was ever carried from port to port on the Great Lakes and will also mean the largest cargo ever carried.

THE NAVAL APPROPRIATION BILL.

The naval appropriation bill, as reported to the House last week, carries a total of \$35,683,058, an increase over last year of \$3,764,432, and over the current estimates of \$2,734,824.

For the increase of the navy the bill allows to be constructed by contract three sea-going coast line battleships designed to carry the heaviest armor and most powerful ordnance displacement, 11,000 tons, with the highest practicable speed for their class, to cost exclusive of armament not exceeding \$3,000,000 each, one to be named the Maine; six torpedo boats, 150 tons displacement, and six torpedo boat destroyers, about 350 tons displacement, the cost not exceeding \$2,340,000; and one gunboat to take the place of the United States steamer Michigan, to cost exclusive of armament not over \$260,000, to be built on the Great Lakes.

One of these sea-going battleships is to be built on the Pacific coast. The contracts for the construction of all these vessels are to be made within 60 days of the enactment of the bill.

Toward the construction of four timber docks \$200,000 each is allowed, each to be not less than 700 feet long and sufficient to meet probable future requirements of the largest vessels. They are to be located at Portsmouth, Boston, League Island and Mare Island, the total cost when completed not to exceed \$850,000 each.

At Algiers, La., a dry dock is to be built, but it is to be of a double-sided, steel floating type, known as the combined floating and graving self-docking dock, capable of lifting a vessel of 15,000 tons displacement and 27 feet draft of water, to cost, including moorings and wharf, \$850,000, of which \$200,000 is appropriated this year.

The bill directs the appointment of a board of naval officers to determine the desirability of locating and constructing a dry dock in the harbor of Galveston, Texas, and to report to Congress at the next session.

MAKING REPAIRS TO STERN BEARINGS.

When anything gets out of order about the stern bearings, rudder or propellers of any of the big car ferries at Mackinac a pontoon is at hand, which is fastened to the stern and pumped out, giving an opportunity to examine and repair all the working parts that are liable to receive injury from rough contact with ice. There are car ferries employed in Russian waters that are provided with an air-tight construction that fits tightly to the stern. Air pressure is then applied which forces the water out, and by entering through an air-tight chamber a machinist can get to the stern bearings, propeller or rudder and make all necessary repairs. But the steamer Pere Marquette, which carries cars across Lake Michigan for the Flint & Pere Marquette railroad, is so arranged as to render repairs more easily made than in any of the above cases. She had been running constantly for about a year, when, a short time ago, it became necessary to repair her stern bearings. To do this her forward compartment was pumped full of water, which sunk her bow deep and raised the propeller high in the air. In this position repairs were easily made without the expense and delay of using a dry dock.

ADVICES from Washington state that the Navy Department has decided to adopt oil as a fuel for torpedo boats. Its advantages over coal have been proven in recent experiments at New York with the Stiletto, and authority has been asked by the special board conducting the trials to fit out this boat permanently with the necessary appliances. It is suggested further that some of the new torpedo boats now building be equipped with similar apparatus. The calorific power of oil over coal was demonstrated on one of the trials of the Stiletto, when it was shown that a ton of coal would run the vessel about twenty-eight miles, while a ton of oil would enable her to steam fifty-six miles at the same rate.

NEWS AROUND THE LAKES.

DETROIT.

Special Correspondence to The Marine Record.

The steamer Bulgaria, owned by James Corrigan, Cleveland, has been given a new boiler while at the dry dock here. She has been ordered to a loading port.

Manager McVittie of the Detroit Dry Dock Co., is quoted as saying: "We shall soon build a dry dock in the vicinity of Detroit of sufficient size to accommodate the largest ships on the lakes. We have not decided whether to locate it abreast the city or at Wyandotte."

Maj. M. B. Adams, Corps of Engineers, U.S.A., in charge of the ninth and eleventh lighthouse districts, with headquarters at this port, is the inventor of a disappearing gun carriage which is said to be a remarkably good thing. He submitted it to the War Department about three years ago, and detailed drawings were then made of it by order of the department. Another disappearing gun carriage was then under consideration, however, and was finally accepted. The designs are still in the Major's hands awaiting orders from the department.

The D. & C. Nav. Co., have placed their second boat on the route to open up daily service between this port and Cleveland. Traffic is all that the company expects at the opening, and will be greatly increased by putting the City of Cleveland on the route. The only change of officers of the City of Detroit that I know of is in a transfer of engineers Mr. Middleton, of the City of the Straits, taking the place of Mr. Sargent. Mr. Middleton has always been well-liked by the passengers in the excursion trade and is sure to hold his record in the Cleveland.

Wallace, Bell & Co., of this city, have been awarded a contract to supply provisions in the tenth light-house district for the next fiscal year at \$59.49 per man per annum on vessels and \$29.83 per man per annum at stations. It seems that there must have been very little competition for this contract. Nor was it generally known that such bids were asked for. Too much publicity can not be given to these government departmental contracts. The same applies to the bids for the use of a steam vessel and small boats required for the Detroit river mail service to be opened by Postmaster Dickerson on the 25th inst.

The local naval reserve corps are dancing attendance on the training ship Yantic. She is quite an interesting fad for the naval enthusiasts just now. I learn through the RECORD columns that the "boys" at Cleveland would like to dispose of their late pet (white elephant) the Andrew Johnson, it was a sure thing that they would soon grow tired of being amateur shipowners and sailors, chief cooks and bottle-washers all rolled into one, but where are their advisors that ought to have known better than to force such an incubus on them. How would she make a ferry boat trading to the south shore ports on Lake Superior, she is a good old craft yet, as Uncle Sam kept her up well, and had a large crew of officers and men to do nothing else but nurse and tend her.

BUFFALO.

Special Correspondence to The Marine Record.

Capt. Edward Mullin, of Chicago, is fitting out the schooner Commerce, and Capt Charles Keefe the Columbia.

The tug William M. Gee, building for David Baird, of Camden, N. J., at the yard of Hingston & Sons, was launched on Saturday.

The steamer Lehigh was taken out of the Mills dry dock and the Lycoming and Gordon Campbell were docked for general overhauling.

No boats of the Union Steamboat Company will be started until April 16, at noon. The Ramapo and Tioga are listed to start on the season's initial trip on that date.

Official notice of the appointment of W. H. Johnson as agent of the Anchor Line was received here on Tuesday. Mr. Johnson succeeds J. C. & E. T. Evans, resigned. The change goes into effect April 1st.

Engineers and crew of the steamer Thomas Davidson have come on from Milwaukee, and the crew of the C. B. Lockwood, from Cleveland, for the purpose of putting their vessels in shape for the opening of navigation.

The new steel tug building at the Union Dry Dock Company's yard for Hickler Bros., of Sault Ste. Marie, is plated and her machinery is going in. Boilers were placed in the new steel tug building for the Maythams and she will be launched in about a week. The Ramapo followed the Curry in dry dock.

Lake Erie life-saving stations will be opened on April 1st. Capt. E. E. Chapman, superintendent of the 9th district, has issued orders to that effect, and Capt. Thomas Williams has notified his crew to report for duty on Friday of this week. The personnel of the crew will not be changed, provided all are found physically qualified after undergoing medical inspection.

A verdict has been awarded to John Kelderhouse and the Maytham estate for \$2,535.22. Action was brought against the St. Paul Fire & Marine Insurance Company, of Minnesota, to recover on the loss of the steamer Northerner, burned in the harbor of L'Anse, Mich., in 1890. The case occupied the attention of the court several days. It is stated that the insurance company will appeal.

Supt. Brodie, of the Northern Steamship line, has completed his appointment of masters and chief engineers. On the Northern King James Saunders will be captain and John O'Hara, engineer. The two passenger boats will be officered as follows: North West, G. A. Miner, captain; J. A. Courier, engineer. North Land, Wesley C. Brown, captain; R. S. Grant, engineer. Grant was junior first assistant engineer on the North West last season.

Last year the schooner Colwell was converted into a steamer by the addition of the machinery and engines of the steamer Heyward. About the same time the Buffalo Ship Chandlery Supply Co. filed libels against the hull of the Colwell and against the machinery of the Heyward. A bond has recently been filed for the release of the Colwell but the machinery of the Heyward still remains in custody of the United States marshal. The Colwell can't take away the property of the Heyward and the marshal has technically no further right to restrict the movements of the Colwell. This complication of affairs will probably be settled by filing a bond for the machinery. Such is the report.

Among the applicants for electric power from the Niagara Falls tunnel are four leading harbor elevator owners. The Export and Frontier are said to be among the number. Manager Dodge, of the Frontier, said the other day that he was not asking for all there is in electric power. If the current will take the place of his coal bill he will be satisfied. Of course, there are other owners of machinery who are asking for a closer bargain than that, and as the transmission company is studying the cost of the current from every possible point of view, this is a critical stage of the introduction of this power. The use of the electric current in the Great Northern and electric elevators and at the Union dry dock yard is reported to be very satisfactory.

PORT HURON.

Special Correspondence to The Marine Record.

Capt. Stewart has left for Chicago to fit out the Simon Langell.

H. E. Runnels says his boats will not start out until about April 15.

Capt. Cyrus Sinclair and wife of Chicago, are in the city for a few days.

The steamer Nimick has been chartered for corn from Milwaukee to Buffalo at 1 1/4 cents.

Capt. McGregor left for Milwaukee Friday morning to take charge of his boat, the G. H. Dyer.

The Thompson Towing & Wrecking Association will station the tug Brockway at the Dyke Soo river this season.

There will be no ice to interfere with any boat this spring, and there would be no trouble for boats to begin business now.

Capt. Wm. Bonnah has gone to Tonawanda to fit out the schooner Anna P. Grover, which he will command the coming season.

A large number of pilots and engineers are doing vigorous work in examinations at the office of Inspector Frank Danger this week.

There is a good demand for coal to load before the first of the month, and some of the vessel owners are satisfied that they can get 30 cents a ton to the head of the lakes. Offerings of tonnage are light.

The work on the new tug at Jenks' Ship Building Co. is nearing a finish, and will be ready to launch in about a week. She will no doubt be the strongest built as well as the most powerful tug on the lakes.

The Kendall Marine Reporting Co. have been busy painting their office and row boats to be ready to deliver orders, messages and letters to the large grain fleet which is expected to leave Chicago about next Saturday.

The steamer Pilgrim, which found the water-logged schooner Laura Miller adrift in the lake last season, will probably get all the excess of the sale of the vessel and cargo over the expenses. The net salvage will probably be about \$125.

The Star Line steamer Arundel, made the trip from Detroit to this city on Sunday last without special incident. She has taken up her regular run on the Detroit route. The steamer comes out very nicely refitted for her season's business. Capt. Stover will sail her. Wm. Putnam, of this city, will remain as steward for the season.

Col. Kearney: "We expect to have ready for testing at the Wolverine dry dock early next week another of the government life-saving boats. The boat has been ordered to be sent to Sheboygan, Wis. It is worthy of remark that some of the finest boats to be found in the life-saving service have been and are being built in Port Huron. On the occasion of the testing next week, we have promised a large number of the Port Huron people who are interested in such matters to invite them to be present and witness the launching and the process by which we thoroughly test all of these boats."

Capt. J. G. Kiah, of Sand Beach, superintendent of the life-saving service of Lake Huron, was in this city a few days ago looking up the interests of the new life-saving station above the beaches. The building is practically completed, and the outfit for it, which will be the finest to be had, has been ordered and will begin to arrive within the next two weeks. Capt. Kiah has recommended that the new station be connected by telephone with the Bell Co.'s exchange of this city, a convenience which vessel men and other citizens will thoroughly appreciate. Capt. George W. Plough has been assigned to the charge of the new station, and has already taken up his residence in the city.

CHICAGO.

Special Correspondence to The Marine Record.

The steamer Sanilac is in one of Miller Brothers' dry docks receiving extensive repairs.

J. J. Rardon & Co. chartered the steamer Inter Ocean and consort Richard Winslow for corn to Sandusky at 1 1/2 cents.

The Chicago Ship Building Co. had the car ferry steamer Pere Marquette in dock, last week, for repairs to her stern bearing.

Shipping master J. W. Hanson will open up the Lake Carriers' shipping office, this week, at 164 East Van Buren street.

The schooner Geo. W. Naughton, Capt. John Kemming, left here Sunday, light. She was the first schooner of the lumber fleet to leave port this season.

There is very little doing in grain charters, and shippers are offering less than the latest rates to Lakes Erie and Ontario for vessels expected to arrive here.

Capt. E. F. Matteson arrived here from Marine City Tuesday, to fit out the steamer S. K. Martin. The Martin was recently purchased by John Grawe, of Marine City.

The new tug built by E. W. Heath, at Benton Harbor, for Lydon & Drews, dredging contractors, Chicago, was launched Wednesday, March 23d, and named the Harry Lydon.

D. C. Deegan, the well known vessel supply man, has refitted his store and got in a large stock of groceries, paints, etc., as an addition to his well stocked meat market, and hopes to have his old patrons and many new ones call on him.

It is announced by the N. M. T. Co., (Northern Michigan Trans. Co.), under authority of E. W. Seymour, general manager, that Mr. R. F. Church has been appointed general freight and passenger agent for the line, vice Mr. B. L. Burke resigned.

A well attended meeting of the Chicago Lumber Carriers' Association was held last Friday afternoon at the Le Grand Hotel hall. A schedule of minimum rates on lumber, posts and ties was discussed, also other matters relating to the association, and the meeting was adjourned to Friday, April 1st, when it is expected sufficient tonnage will be procured to start the association on a firm basis.

The Chicago River Improvement Association expects much good to result from the recent visit of the Congressional committee to the docks and elevators along the river. The association desires the establishment of a uniform depth of twenty-one feet from the mouth of the Chicago river to the intersection of the drainage canal in the south branch and to Goose Island in the north branch, and has asked Congress to dredge the harbor deep enough for the largest lake vessels.

Capt. Joseph B. Hall, for many years one of the best known vessel masters on the lakes, died at the residence of his son, the Rev. Francis J. Hall, Sunday morning. Capt. Hall was born at Ashtabula, O., on October 23d 1822, and followed the lakes nearly forty years. He became a resident of Chicago thirty years ago. He retired from sailing about twenty years ago and became a member of the firm of Magill and Hall, vessel agents at this port. While a member of that firm Capt. Hall also occupied the position of chief weigher of customs from 1885 to 1897. He leaves a widow and three grown up children. The deceased's remains were taken to Ashtabula for interment.

The following vessels were towed this week to loading berths, etc.: The steamer Majestic from Milwaukee to Counselman's elevator at South Chicago, the steamer Pentland from Chicago to the Illinois Steel Co.'s dock at South Chicago, the steamer Inter Ocean and consort Richard Winslow to the Indiana elevator, the schooner Golden Age to the Iowa elevator to load grain, the barge Northwest to Armour's "C" elevator, the steamer W. J. Averill to the National elevator, the barge Interlaken to Armour's "D" elevator, the steamer Delaware to the Iowa elevator, the barge Carrington to the Galena elevator to load grain, the steamer Scranton to 19th street, having arrived here, from South Chicago, Tuesday.

Mr. James Barnet, residing at 535, 60th street, Englewood, has sent me copy of some poetry entitled "A Song to the Tay." Words by James Barnet, melody by Ed. J. Loder and arranged by the eminent musician and poet Allen Reid, of Edinburgh, of course it is an excellent composition and all sailors like songs, however, what I have to report is, that Mr. James Barnet personally set up the type forty years ago for the first issue of the Coast Pilot of the Lakes, and up to the time of the Chicago fire in 1871, had published five editions. The Chicago fire was so disastrous to Mr. Barnet that he never regained his commercial standing. His business record for fifty-five years is now being printed. Mr. Barnet recently paid a visit to his old Scottish home and is still hale and hearty.

SHEBOYGAN, WIS.

Special Correspondence to The Marine Record.

The schooner Christiana cleared for Detroit harbor last Wednesday.

The Sheboygan tugs commenced the work of fitting out this week.

Reibolt and Wolters have begun the work of rebuilding the Crocker B. dock.

Will Moore left on Monday to assist fitting out the steamer Andrew Carnegie, as fireman.

The Sheboygan Dredge and Dock Co. desires to purchase a tug, with an engine 20x22 or 22x24 inches.

We had several dense fogs here last week, and the fog whistle was kept blowing almost incessantly.

The steamer Myrtle M. Ross reached Ludington, Thursday evening to load lumber for Grand Haven.

As the appointment of officers for the winter fleet of Sheboygan were not published last week, I again revise them.

The officers of the steamer W. L. Wetmore and consort Brunette, arrived here the fore part of this week to fit them out.

The Sheboygan life-saving crew left for Milwaukee, Tuesday, March 29th, to take the usual physical examination. There will be one or two changes here this spring.

Wednesday's southeaster drove the ice shoreward in Green Bay and destroyed 500 feet of the government pier at Pensaukee, Wis. Eight hundred feet of the pier was left unharmed.

Mr. Frank Kloppenberg and wife have accepted the position as first and second cook on the steamer George G. Hadley, and expect to leave for Chicago about April 1st, to fit her out.

The schooner D. A. Wells was sold by Capt. John Burns and Henry Schilder to Henry Schiffers, of Grand Rapids, Mich. The deal was made last Friday and the craft will hereafter hail from Grand Haven.

The steamer Wm. Rudolph arrived here last Friday with a cargo of salt from Manitowoc. She left Sturgeon Bay last Wednesday night. She cleared here again Saturday night for Empire, Mich., for a Milwaukee cargo.

Edward Long has accepted a berth in the steamer Wm. Chisholm, and will leave for Chicago about the first of April, to fit her out. Fred. Brauer has shipped on the Jno. W. Glidden, and will leave for Chicago on Thursday.

The new tug for Endress Bros. was launched Wednesday, at Manitowoc, and has been christened C. W. Endress. She will be used in the fishing business on Lake Superior and will be completed and ready to sail about April 1st.

The steamer Petosky, of the Crosby line, is in dry-dock at Manitowoc. She is to receive new bulwarks and a complete overhauling. It will take about a month to complete the work on her. The Manitowoc Boiler Works have the job of repairing her boilers.

Government inspector Chapman was here last Friday and inspected the boilers of the steamers Susie Chipman, R. A. Seymour and the tugs Sheboygan and Satisfaction. The repair work on the boiler of the Susie Chipman has been completed by Sonneman & Optenberg, and the steamer will go into commission on April 1st.

The ice in Green Bay is weakening very rapidly and it is only a question of a few days when navigation will be opened. Fishermen have all moved ashore and there is a long stretch of open water between Chamber's Island and Death's Door. One of the Ann Arbor steamers will undoubtedly make a trip there this week, as a large quantity of freight awaits shipment over the line at Marinette.

The following was an Associated Press dispatch from Washington last Friday morning: "The House committee on rivers and harbors has favorably reported a bill for the survey of the harbor of Port Washington, Wis., with a view of deepening it to fifteen feet and extending existing piers so as to make the harbor safe for vessels. The committee has also recommended the survey of the harbor of Sheboygan, Wis., looking forward to its protection from northeast seas."

MANITOWOC.

Special Correspondence to The Marine Record.

At Burger & Burger's shipyard the steamer Petoskey is in dock for bottom calking, some new stanchions, plank spout, shear stringers, bulwarks, and rail all around, part new stem, new planking on stern; the steamer Black Rock was in for overhauling and necessary repairs to her bottom and some calking; the steamer Indiana was in and had her stern bearing repaired; the steamer Atlanta had her wheel fastened and stern bearing repaired; the steamer Charlemagne Tower received some new deck and outside planking; steamers Carnegie, Spokane, George Farwell, Geo. F. Williams and H. A. Hawgood, repairs; the tug Stewart was on boxes and had leak stopped; the tug Lorain for some outside plank and calking and ironing; the schooner Emma E. Nelson received new stern and fender strakes. The firm supplied a large quantity of timber for repairs on the steamers H. W. Sibley, Chas. A. Eddy and eighteen vessels of the Gilchrist fleet. They are building a new tug for Endress Bros., Sault Ste. Marie, dimensions 90 feet long, 19 feet beam, 8 feet hold; also a new tug for Justice Bradwell, Chicago, dimensions 75 feet long, 17 feet beam and 7½ feet hold.

CLEVELAND.

Special Correspondence to The Marine Record.

The H. B. Tuttle, owned by Capt. C. E. Benham, has been placed in the Kelley's Island stone trade.

The D. & C. line have placed their second boat on the route arriving here from Detroit last Wednesday morning.

A temporary naval recruiting station, or shipping office will be opened in the postoffice building within a few days.

Mr. C. B. Calder, manager of the Detroit Dry Dock Engine Works, made a business trip to this port, during the week.

Lorain is cutting quite a figure in loading coal cargoes this spring, several large steamers having been placed at that port.

The Phenix Nautical Co., J. M. Beverly (local attraction Jack) manager, reports a very brisk line of business during the past month.

It is reported on the best authority that 8½ million tons of iron ore have already been purchased as part of the Lake Superior output.

There has been quite a lively traffic in the river this week. A few entrances and clearances and a number of transfers to and from loading berth, dry docks, etc.

The C. & B. line will open their route on Saturday with the departure of the City of Buffalo from this port on Saturday night. Daily service between the ports will begin May 1st.

Every department of the Globe Iron Works Co. is now kept busy, and the orders for new work are very extensive, some figuring is also being done on plans and specifications for new tonnage.

Four quadruple expansion engines were turned out of the engine shops of the Cleveland Ship Building Co. this winter and the shops have still a large quantity of work on hand in addition to the spring outfit work on steamers.

Dredging has begun in the river and harbor master Brock feels sure that no undue detention will be forced on vessels this spring on account of shoal spots which deep loaded vessels have generally found nearly every other season.

M. E. B. A. No. 2, have just issued their ninth annual directory having a circulation of 5,000 copies. The association and its committee on printing are to be congratulated on the good work evidenced in this year's compilation as it is ahead of all its predecessors.

Messrs. Grover and Collier are known as the purchasers of the wooden steamers Badger and Empire State from the Detroit Dry Dock Co. It is the intention of the stockholders to place them on the Toledo-Ogdensburg route; but, final arrangements are not yet concluded.

While Capt. David Vance, of Milwaukee, was here last week, conversation turned upon large tonnage, and he spoke of a great cargo which he carried from Chicago to Buffalo over forty years ago. The wonderful record breaking cargo of that age amounted to 12,000 bushels. Twelve such cargoes are now carried in one bottom.

The principal owners of vessel property have signed an agreement with Martin Connor to give him the work of unloading grain cargoes at this port at the inclusive cost of \$2.50 per thousand bushels. There is not much grain handled at Cleveland and the trimming to the elevator spouts has all to be done by hand, should the imports increase steam shovels will no doubt be used.

The following is a list of the crew at the local life-saving station shipped for the season under Capt. C. E. Motley: Arnold King, David Sullivan, Peter Coughlin, Geo. Warner, Frank Burbank, Harry Rice, Eugene Butler, John Russell, Charles Jarrait and Daniel Mulcahy. This port has the distinction of being allowed the largest crew in the life-saving service. Eight men is the usual complement.

The Globe Iron Works Co., are pushing work on the two new revenue cutters which it is understood are to be taken through the St. Lawrence system of canals and turned over to the Navy Department on the seaboard. The "Globe" recently built the largest vessel which could lock through the canals to tidewater and are fully conversant with the changes it will be necessary to make in the two cutters to get them down to the coast.

Mr. H. A. Hawgood who has been under the weather for the past few weeks has got back to business again and his health is picking up steadily. It is generally recognized that Mr. Hawgood as a vessel owner, is one of the most discreet and well advised in the business. I have heard lots of inquiries about him and for him while he was laid up and many of his friends will be pleased to learn that he is in a position and fit to haul out to windward again.

Work on the two revenue cutters now under completion at the yards of the Globe Iron Works Co., is being pushed as rapidly as possible. Captain John W. Collins, engineer-in-chief of the revenue cutter service, spends most of his time at the ship yards. At the request of the government an estimate has been made of what it will cost to take the two cutters through the Welland canal. It has been found that this will cost about \$1,000 for each vessel, the chief part of the work being the removal and replacing of the fantails so that they can enter the locks of the St. Lawrence system of canals.

APPOINTMENT OF OFFICERS.

The West Division Steamship Co., Milwaukee, Wis.: Steamers—Fred. Pabst, master, D. C. Sullivan; engineer, C. H. Wilcox. W. H. Wolf, master, Wm. Lund; engineer, Thos. Allbrighton.

W. H. Hill, Erie: Tugs—Scott, master, M. Carr, of Buffalo; engineer, Thomas Hill, Erie. America, master, Thomas Boyd, Erie; engineer, Thomas Boyd, Jr. Erie, master, E. L. Thompson, Erie; engineer, Robert Hill.

Messrs. Curtis & Brainard, Toledo, Ohio: Steamers—Cherokee, master, W. A. Ashley; engineer, Arnold. Mohegan, master, Wm. Hogan; engineer, Regan. Schooner—Chippewa, master, John Davidson. Mingoe, master, A. Sudgrove.

Spaulding Lumber Co., Chicago: Steamer—H. L. Worthington, master, James Travis; engineer, Fred Otto. Schooners—J. B. Wilbor, master, John Bates. William Jones, master, Oscar Clow. D. B. Martin, master, Oscar Clow, Jr. T. J. Bornson, master John Bates.

Delta Lumber Co., Detroit: Steamers—Lewis Pahlow, master, H. McGowan; engineer, L. Jubenville. Ionia, master, B. F. Ogden; engineer, Thomas Purvis. City of Berlin, master, John Buie; engineer, Samuel Braund. Schooners—Delta, master, A. H. Shaffer. Wand, master, A. H. Shaffer, Jr.

L. S. Sullivan, Toledo, O.: Steamer—David W. Rust, master, Wm. J. Seaver; engineer, L. De May. Schooners—C. C. Barnes, master, George W. Burtis. Chicago Board of Trade, master, George Bonnah. John Schutte, master, Oscar H. Brown. Horace H. Badger, master, James Robinson. Maumee Valley, master, H. Scanlon.

The C. P. R. Co., Sarnia, Ont., have announced the following appointments for the coming season: Manitoba, master, E. B. Anderson; mate, Thomas Martin; second engineer, R. Chalmers; purser, W. Bethune; steward, M. Cooney. Alberta, master, J. McAllister; mate, L. Pyette, second mate, Alex. Brown; chief engineer, A. Cameron; second engineer, Findlay; purser, J. Lane; steward, Jas. Brown. Athabasca, master, G. McDougall; mate, M. McPhee; second mate, A. McNab; chief engineer, Wm. Lockerbie; second engineer, J. Davey; purser, J. McEdwards; steward, James Gardhouse.

The Geo. Hall Co., Ogdensburg, N. Y.: Steamer—Hecla, master, D. Courigan; engineer, D. Doyle. Tugs—Proctor, master, W. A. Russell; engineer, A. E. Cline. Wilson, master, Jos. Richard; engineer, Jas. Conliff. Curlew, master, P. J. McGrath; engineer, Geo. Cline. Schooners—W. A. Sherman, master, C. W. Howard. Bolivia, master, Jos. Gooden. Jennie Matthews, master, F. D. Lum. Beals, master, Geo. Code. Mary Lyon, master, S. LaFlam. Barges Diamond, master, Alex. Rabideau. Mohawk, master, Laurent Vernier. Onondaga, master, Isidore Brunette. Argosy, master, John Gauthier.

The following are the appointments at Sheboygan, Wis.: Steamers—Susie Chipman, master, Nick Gunderson; engineer, Robert Edwards. Wm. Rudolph, master, Rudolph Reibolt; engineer, Edward Davis. R. A. Seymour, master, Edward Cox. Tugs—Sheboygan, master, William Groh; engineer, Wm. Theik. Satisfaction, master, Ole Groh. Schooners—L. E. Raesser, master, Wm. Lawrence. City of Grand Haven, master, Antone Kjelsson. Quickstep, master, Mike Anderson. Sardinia, master, Wm. McDonald. Jennie Weaver, master, Engbert Larson. Levi Grant, master, Fred Lawrence. R. P. Mason, master, Henry Reibolt. Jos. DuVall, master, Max Pfeil. Petrel, master, Martin Nelson. Rosa Belle, master, Peter Peterson. J. H. Stevens, master, John Olson. Lily E., master, Louis Gunderson. J. A. Holmes, master, Fred Gunderson. H. D. Moore, master, Martin Gunderson. Cynthia Gordon, master, George Roitsch. Eliza Day, master, Gus Johnston. Abbie, master, Jas. Elverson. C. Amsden, master, Charlie Fairweather. Surprise, master, —. R. H. Becker, master, Chas. Grasshorn. Mary Packard, master, Geo. Mutson. Vega, master, Louis Olson. John Mee, master, Nelse Olson. D. A. Wells, master, John Bruns.

Hawgood & Avery Transit Co., Cleveland: Steamers—S. S. Curry, master, Geo. Rowbarge; engineer, Geo. Smith. Geo. F. Williams, master, Thomas Ellis; engineer, R. B. Buchman. Servia, master, Fred Ahlstrom; engineer, Richard Mahoney. Schooners—Hawgood, master, D. D. Gordon. Moravia, master, A. C. Hansen. Ewen, master, Fred Watson.

Bradley, M. A., Cleveland: Steamers—Alva, master, M. Mullholland; engineer, J. N. Kirby. Geo. Stone, master, C. H. Francke; engineer, Edwin Black. Hesper, master, J. A. Holmes; engineer, A. R. Crook. Pasadena, master, L. Stough, engineer, J. H. Gilbo. Gladstone, master, Paul Howell; engineer, P. H. Doyle. M. B. Grover, master, W. E. Morris; engineer, G. F. Hunt. City of Cleveland, master, J. H. Wyson; engineer, Alonzo Smith. Henry Chisholm, master, P. H. Smith; engineer, C. W. Eaton. R. P. Ranney, master, C. H. Wallace; engineer, A. J. Millet. J. S. Fay, master, A. B. Keller; engineer, F. P. Fitzgerald. Fred. Kelley, master, Geo. Malloy; engineer, D. McMeneny. Superior, master, G. D. Tulian. S. E. Sheldon, master, H. F. Holmes; engineer, Guy Hemenger. Schooners—Adriatic, master, E. Saveland. John Martin, master, Jas. Lawless. D. P. Rhodes, master, John Bridge. Sandusky, master, A. B. Parsons. Thos. Quayle, master, Fred Green. Ahira Cobb, master, N. Gifford. Negaunee, master, O. C. Olson. Southwest, master, Jas. Gibson.

Montreal Transportation Co., Kingston, Ont.: Steamers—Active, master, Edward Bennett; engineer, John Hamilton. Bronson, master, Jos. Murray; engineer, R. Hepburn. Glide, master, Thos. Murphy; engineer, Geo. Tuttle. Glengarry, master, Gordon Kean; engineer, John Evans. Jessie Hall, master, G. Martin; engineer, Alex. Barton. J. A. Walker, master, John Boyd; engineer, Geo. Boyd. D. G. Thomson, master, Jas. Murray; engineer, G. Henderson. Bannockburn, master, John Irving; engineer, R. Taylor. Rosemount, master, J. W. Mawdesley; engineer, H. Thurston. Lake schooners—Kildonan, master, Maxine Lefebvre. Minnedosa, master, R. G. Irwin. Selkirk, master, H. Colvin. Winnipeg, master, Jas. Kirkwood. Melrose, master, Jas. Fleming. Dunmore, master, John Phillips. River barges—Alberta, master, Frank Poirier. Acadia, master, Louis Hebert. Bella, master, Peter Lalonde. Cleveland, master, J. D. Perron. Chicago, master, Arsene Charlebois. Colborne, master, Ben. Sauvie. Corn Crib, master, A. Charlebois, Jr. Cornwall, master, H. Boyer. Detroit, master, Treffe Davust. Dorchester, master, Jules Lalonde. Eagle, master, A. Monnette, Jr. Hector, master, Tim Hebert. Glengarry, master, Albert Major. Harvest, master, John Bradley, Jr. Iowa, master, Jos. Davust. Jennie, master, Moise Moreau. John Gaskin, master, Theo. Leduc. Lancaster, master, Jos. Page. McCarthy, master, E. R. Roy. Montreal, master, M. Lefebvre. Maggie, master, A. Monnette. Nebraska, master, Celestia Leboeuf. Regina, master, Ovide Trudell. Senator, master, Alfred Lalonde. Star, master, E. Secotte. Toledo, master, Fred. Leduc. Toronto, master, A. Levoie. Wheat Bin, master, A. St. Marcelles. Coburg, master, Frank Lafrance. Brighton, master, N. Mallette. Kingston, master, Alex. Hebert.

A NEW SHIPPING ROUTE.

A recent report from Consul General Turner, of Ottawa, to our government, gives the following particulars regarding the new freight line from Chicago to Montreal via the Canada-Atlantic, notice of which we have previously given: "The Canada-Atlantic and Ottawa, Arnprior, and Parry Sound railways (which are practically one company), operating railway lines from Parry Sound, on Georgian Bay, to Swanton, Vt., have, by the chartering of the steamers, Saxon, Grecian, Briton, German and Roman, of the Menominee Transportation Co., completed the last link in the project for a new transportation line from Chicago to Montreal. It is proposed to run these steamers from Chicago to Parry Sound and there transship freight, via the above-named railways, to Coteau Junction, Quebec; thence over the Grand Trunk R. R., 37 miles, to Montreal. The object of this line is to carry grain for shipment to foreign countries from Montreal, and it is confidently expected that this line will figure largely in the movement of the grain crop of the Western states. It is reported that Duluth will also be included as one of the ports in the United States. There is now building at Parry Sound a large elevator for handling the grain from the steamers to cars and another at Coteau, on the St. Lawrence river. The company are preparing to build their own line from Coteau to Montreal, so that freight will be handled entirely by themselves. The object of this line seems to be to draw foreign shipments from the United States to Montreal, and it is expected that it will be a great success. The line has a number of advantages in the way of reaching the deep-water steamships. The lake portion is reduced to a minimum, and the distance by rail from Parry Sound to Montreal is but 382 miles. These lines are practically owned by Americans, and are officered and managed by men from the state of Vermont. It is expected that millions of tons of grain will pass through Ottawa over this line."

NEW LAKE MICHIGAN PASSENGER STEAMER.

(SPECIAL CHICAGO CORRESPONDENCE.)

The new wooden passenger and freight screw steamer built for the Goodrich Transportation Company, of Chicago, by Messrs. Burger & Burger, of Manitowoc, Wis., was successfully floated out of dock on the 9th inst. and will be in commission about May 15th. This vessel, named Georgia, has been specially designed for winter as well as summer service on Lake Michigan, and will be run on the west shore between Chicago and Green Bay ports. Her principal dimensions are: Length over all 206 feet, length on keel 192 feet, breadth inside of bulwarks 34 feet 1 inch, breadth of hull 29 feet 8 inches, depth molded 12 feet 6 inches, depth of hold 12 feet. She is built of the best Wisconsin oak and has two substantial arches, strongly reinforced with heavy deep steel plates on either side, which extend from the fore-foot forward down to near the sternpost aft. The stem and apron piece is over 3 feet thick, molded, and covered with heavy iron for breaking ice, and the hull is covered with number 12 w. g. iron from below light draft water line to well up under the guards as a thorough protection from ice. On the cabin deck are 46 well ventilated state rooms, each fitted with an electric incandescent light set over the mirrors; the rooms on this deck will accommodate 100 passengers in berths. On the promenade deck in the texas immediately abaft captain's room are 4 state rooms to be used as sitting rooms; these rooms are constructed with double walls and are designed to be occupied separately or en-suite, and will be finished in white enameled paint and elegantly upholstered. The dining saloon on cabin deck forward will accommodate 54 persons at one table. The smoking room is neatly paneled and finished in the natural birch with a convenient distribution of plate glass mirrors worked into paneling. On the main deck aft is the social hall or passenger vestibule which will be paneled and finished in the natural birch polished; here are located the pursers' and stewards' offices and the package room for the convenience of passengers. The Georgia has ample space on the hurricane deck for passengers promenading, although she carries four lifeboats and as many life-rafts midships. Two additional lifeboats are carried aft and are always suspended in the davits in such a way that they can be lowered at a moment's notice, the boats being all fitted with Captain Raymond's patent automatic releasing hooks. The vessel will be lighted throughout by electricity, about 1,000 lamps of 16 c. p. each, being used. The painting and decorating is by Messrs. Crossman & Sturdy, interior decorators of Chicago. The joiner work has been done by the Manitowoc Building Supply Co. The Georgia is rigged with

two pole spars standing about 66 feet above the upper deck, on which are light gaffs for sails when necessary. The engine a fore and aft compound 21 inches by 44 inches by 36 inches stroke, of about 900 indicated horse-power, were built at the Detroit Dry Dock Co.'s engine works. The boiler is 14 feet by 11 feet, built by the Globe Iron Works Co., of Cleveland, O. The windlass was furnished by the American Ship Windlass Co., of Providence, R. I. One of the novel features of the Georgia is her fire extinguishing apparatus, which consists of a series of piping with 75 sprinklers attached; these sprinklers have a radius of action of about 8 feet and when the pumps are started and the valves opened the entire main deck and the hold, both or separately, can be deluged in a few moments. The system of piping is so arranged overhead that water need not flow except in the place where fire is threatened or already exists. The main cabin and promenade deck and upper works are protected from fire by hydrants with hose attached ready for use, and there are a number of chemical fire extinguishers located all over the vessel in convenient places. The steamer Iowa of the Goodrich line was the first vessel that has been fitted with sprinklers.

Captain John W. Gillman, the courteous and esteemed superintendent of the fleet has been at Manitowoc this winter seeing the work carried out according to the plans which were prepared at the Goodrich Trans. Co.'s drawing office in Chicago. Mr. A. W. Goodrich, on assuming the presidency of the line, inaugurated a series of alterations and improvements with a view to the comfort of passengers and the better appearance of the vessels and has brought the fleet to its present high state of efficiency, in which it ranks second to none in handling passengers and freight carefully and expeditiously on the lakes, and cannot be rivaled on the coast. The officers of the Georgia are: Captain, Edward Carus; engineer, Joseph Webber; purser, John W. Keith, and steward, W. J. Rearden.

THE LEITER WHEAT AT CHICAGO.

Joseph Leiter has made formal application for membership in the Chicago Board of Trade. All the enormous dealings in wheat which have made Mr. Leiter's name famous have heretofore been transacted through brokers.

The fleet laden with the great speculator's wheat at Chicago is as follows:

	Bushels.		Bushels.
Iron King.....	78,000	Niko.....	48,000
Servia.....	77,000	Iron Cliff.....	65,000
Iron Duke.....	53,500	M. E. M'Lachlan.....	96,500
Iron Age.....	56,000	Barge 115.....	94,000
T. Maytham.....	115,000	Iron City.....	48,000
A. D. Thompson.....	95,000	G. E. Hartnell.....	171,000
Germanic.....	60,000	Martha.....	170,000
Marina.....	105,000	Churchill.....	60,000
Marcia.....	105,000	G. B. Owen.....	72,000
Argo.....	44,000		
W. P. Ketcham.....	60,000	Total.....	1,672,000

LAKE ST. CLAIR AND ERIE CANAL.

The Canadian government has been petitioned to guarantee the bonds of the St. Clair & Erie Ship Canal Company to the extent of 3 per cent. interest charges for twenty years on an issue of \$5,500,000. Its promoters claim that by this canal the distance between Lakes St. Clair and Erie could be shortened by 79 miles, thus avoiding the delays and dangers of the Detroit river route, and lessening the cost of transportation between Fort William and Lake Erie. The government would not be expected to pay any of the interest guaranteed, as provision would be made for such payment during construction, after which the tolls on less than one-third of the tonnage now passing through the Detroit river would pay the interest on the bonds and all expenses of maintenance and operation.

CLIMATES DON'T CHANGE.

A correspondent in Northfield, Mass., desires our opinion on the question: "Were the winters of fifty or seventy-five years ago much colder, or were the snowfalls deeper than at present?" The opinion is widely held that the winters were colder and the snowfalls deeper, but I can find nothing to warrant the belief, except that in the first part of the century a much larger percentage of the population lived in the hill towns or in the interior, which are both colder than the valley or the coast towns," says Prof. Cleveland Abbe in Weather Report.

On the general question as to appreciable changes in climate the editor's opinion is that there has been no such change in any respect whatever so far as meteorology proper is concerned. If we divide our records of the weather re-

corded in North America since the days of Columbus into two periods, namely, before and after the year 1800, we shall find that every peculiarity, such as remarkable storms, winds, rains, floods, frosts, etc., recorded in the current century can be matched by a corresponding remarkable event before the year 1800. The popular impressions alluded to by our correspondent result almost entirely from the imperfections of our records and especially of our memories. There is a larger class of persons whose habits of thought are so crude that when they experience any very remarkable weather they jump to the conclusion that the climate has changed, forgetting that they themselves have had such a limited personal experience that they are not fair judges of the weather over the whole country or the climate of a century.

Our correspondent seems to suggest that a certain change in the habits of the people, such as the removal from the interior to the coast, or from forest to prairies, or from country to city, or vice versa, will partly account for widespread errors in respect to climate. The suggestion is excellent, but the editor would be inclined to interpret the phenomenon somewhat differently. The general movement of the population in the past century has been from the Atlantic states westward, and from the country to the city, or quite opposite to the movement suggested by our correspondent. In fact, we find no real agreement in the so-called popular traditions with regard to the weather. We have met with quite as many persons who think the winters are less severe than formerly. Everything seems to depend upon how and where the "oldest inhabitant" lived when he was a boy as compared with his present condition. If he moved from a farm on a windy hill top in the country, down to a cozy house in the village, the climate seemed to him to have improved. If he moved from the milder climates on the coast in his youth to the severer climates in the interior he was, as a boy, struck with the great change, and the impression still remains with him that those winters were severer than now. If he has lived continuously in a large city like New York, where the growth of all houses, the increased smoke, and diminished sunshine have completely changed the climate, and where these, combined with the changes in the mode of living, especially the abolition of the open wood fire, has rendered the human system vastly more sensitive he finds that the inequalities of climate are greater than formerly.

From a hygienic point of view, "the climate" includes everything that affects the health and comfort of the body. The meteorological climate that agrees perfectly with one person may be entirely too severe for another. Our remembrance of our physical sensations is not a safe criterion when judging of climate. Our remembrance of an occasional storm or winter is not a safe guide in comparing the past with the present. Our records of deep snows are too fragmentary to give anything more than a general conviction that there has been no material change in the snowfall. Our records of extreme low temperatures are liable to be in error several degrees by the ancient use of very imperfect thermometers, and are almost certain to be exaggerated if the thermometers were placed in valleys or lowlands, where cold air settles on still, clear nights, so that we must use great caution in interpreting these records; difference of 5, 10 and even 20 degrees have occurred between the minimum temperatures recorded by weather bureau and voluntary observers located within a few miles of each other, owing to the combination of these two sources of error.

Remarkable rains and snows are usually quite local phenomena; there have been several remarkable cases of this nature in certain portions of New England and the Middle Atlantic states within the past ten years. Similar remarkable cases occurred in other portions of these states fifty years ago and equally remarkable cases occurred in still other portions just before 1800. If there has been any change in the climate of Northfield, Mass., it is because it lay within some of these regions of extraordinary rain or snow on one occasion and not on another. Such a change of climate at one spot is no criterion by which to judge of changes at other places 100 miles away. The average climate of New England so far as the weather is concerned has not appreciably changed since the days when her oldest forest trees were young saplings, and that carries us back nearly 500 years.

VESSELS CLASSED.

The American Shipmasters' Association classed or rated this week in the "Record of American and Foreign Shipping" the following named vessels: Barks, Ceres, Onaway; screw steamer, Indiana; British schooner, Neva; Swedish schooners, August and Gustaf.

ANOTHER DRY DOCK FOR WEST SUPERIOR.

The American Steel Barge Co. intend to go ahead with the construction of a new dry dock as soon as the weather will permit. It will be considerably larger than the present one. The new dock is required on account of the steady increase in the business, which has grown in a few years to large proportions. It will be built alongside the present dock, and will be large enough to accommodate a boat 550 feet in length and 55 feet beam. The dock to cost about \$150,000.

The company has expended over \$80,000 in actual improvements on its plant this winter. The big machine shop recently finished represents a cost of about \$30,000, and the large powerful electric crane an equal sum. The company has also put in a new electric lighting plant, pneumatic riveting and calking machines and various other expensive machines and improvements.

The two cargo vessels now under construction at the ship yards will be completed about May 1. They are the steamer Alex McDougall, which will be the largest vessel that has been built by this company, and the schooner that is building for the Minnesota Steamship Company, Cleveland. The McDougall will have a carrying capacity in 18 feet of water of about 6,000 tons. Her principal dimensions are: 430 feet in length, 50 feet beam and 27 feet deep. The schooner will have a capacity of about 5,000 tons, principal dimensions, 376 feet long, 46 feet beam and 26 feet deep.

TREASURY DECISIONS RELATING TO MARINE INTERESTS.**PILOTS OF STEAM VESSELS.**

Pilots employed on registered steam vessels are not recognized as officers of such vessels.

TREASURY DEPARTMENT, March 18, 1898.

SIR: This department is in receipt of your letter of the 6th instant, in which you say, referring to department decision dated the 25th ultimo, informing you that steam vessels sailing under register were exempt, under section 4401, Revised Statutes, from carrying United States licensed pilots, that this department did "not seem to quite understand the object of my [your] communication" eliciting the decision referred to.

In reply, you are informed that pilots of steam vessels are "officers" of such vessels in the sense contemplated in section 4431, Revised Statutes of the United States, when employed upon such vessels as are required by section 4401 of the Revised Statutes to carry licensed United States pilots, registered vessels being exempt from carrying United States licensed pilots. Pilots employed on such vessels would not in law be "officers" thereof, even though such persons were holding United States license; the only officers of such vessels required by law would be the master, mates, and engineers.

Respectfully, yours,

O. L. SPAULDING, Acting Secretary.

Mr. A. J. SMITH, San Francisco, Cal.

SPRINGS IN CHAIN CABLES.

Mr. Thomas S. Whitman, Portuguese Vice-Consul at Nova Scotia, has invented a spring, which, it is claimed, will give sufficient tension to a cable or steel hawser to prevent parting under sudden strains, such as are put upon them at times. Each link of the chain is fitted with a powerful spiral spring, and with any abnormal strain the springs act, and so give the necessary relief. The idea is not to have the whole length of cable so made, but to have a length of this "stretching" chain shackled on to the ordinary cable sufficient to allow of the necessary amount of tension required. The same applies also to the steel hawser in towing. The idea is without doubt a good one, but its adaptability under the conditions that sometimes exist when ships are at anchor or in tow is a matter that practical demonstration alone can show. It has been received with favor in underwriting circles in the United States, but the opinion of the master of a deep-sea tugboat after a long and hazardous tow would have infinitely greater weight.

OPENING OF NAVIGATION.

Navigation on the lower lakes, so far as local traffic is concerned, generally opens from the 1st to the 15th of April. On the upper lakes and connecting waters the opening is deferred until about the 1st of May on the average. The Straits of Mackinac are generally clear of ice by April 20, and the St. Marys river about ten days later.

During the last forty-two years navigation at the "Soo" has opened before April 20 five times, and on or before the 15th twice, viz, in 1889 and 1878. The date of opening in

1878, viz, on April 8, is the earliest on record. The winter of 1877-78 was mild and open, and the weather during March and April was exceptionally warm throughout the entire lake region. Vessels passed through the Straits of Mackinac as early as March 14. The first large steamer bound for lower lake ports left Duluth, the head of navigation on Lake Superior, on April 4, and the first arrivals from the east reached that port on the 12th.

The time between the earliest and latest opening of navigation at the "Soo" and Lake Superior ports is about thirty days. It has never opened earlier than April 8, nor later than May 12. On the lower lakes the range is somewhat greater.

HEROIC LIFE-SAVERS.

In the series of "Heroes of Peace" there is an article in the April Century on "Heroes of the Life-Saving Service," by Gustav Kobbe. Mr. Kobbe says:

District Superintendent Jerome G. Kiah, with headquarters at Sand Beach, Michigan, is one of the heroes of the Life-Saving Service. He holds the gold medal, the highest award the United States government can bestow for heroism in saving life. His name is associated with what was both one of the most daring attempts at rescue and one of the greatest tragedies of the service—a tragedy which wiped out an entire crew with the exception of this sole survivor.

Mr. Kiah was at the time keeper of the Point aux Barques life-saving station on Lake Huron. A vessel struck too far out to be reached with the shot and line. The peril of attempting a rescue with the surfboat was only too apparent;



JEROME G. KIAH,

Superintendent of Tenth Life-Saving District, Sand Beach, Mich.

but keeper Kiah mustered his men, and made the launch. For a while their strength and skill enabled them to surmount or push through the tumultuous seas; but, once in the open lake beyond the shoals, where the storm was free to riot at will, the real danger began. It was a test beyond human powers. The keeper remembers that twice the boat capsized and was righted. After that he has a vague recollection of the boat capsizing and righting herself several times, and of the crew clinging to it until, one by one, the surfmen, perishing of cold, let go their hold, and vanished beneath the waves. He has a dim remembrance of the boat, with himself clinging to it, grating over the shoal, and then being flung up on the shore.

He was found by two men, standing, with one hand on the root of a fallen tree, steadying himself with a lath in the other, and swaying as if walking, but not stirring his feet—a dazed, tottering wreck of his former self, murmuring in an incoherent way:

"Poor boys! Poor boys! They are all gone—all gone!" Temporarily shattered in mind and body, he was obliged to resign from the service. He was long in recovering, but finally it was possible practically to reward his bravery with the appointment to his present position.

THE FRENCH MERCANTILE MARINE.

An object lesson in shipbuilding bounties is given by our Consul at Rouen in reference to the Chantiers de Normandie, or dockyard at Rouen. A number of well-built ships were launched from there, but most of them were constructed at a financial loss. Recently four sailing ships were on the stocks there, and there were no funds to complete them, so a meeting of the shareholders was called to consider the best course to pursue. Although the bounty on construction exceeds £5,000 on a ship of 2,000 tons, it was found that in the building of one ship there had been a loss of nearly £6,000. Bonds secured on the yard had already been issued, and it was impossible to raise any more money in that way. Hence a new company had to be formed and enough capital to finish the vessels on the stocks was secured only by an issue of shares, almost all of which were taken up by the owners of the unfinished vessels. The original shareholders were allowed shares in the new company to the value of one-fifth of their original investment, so that, in any event, they lose four-fifths of their capital. The four ships were thus completed; but no more orders are taken, the slips are vacant, and work has practically ceased in the yard. French capital refuses to look upon the enterprise as an investment, and efforts are now being made to induce foreign capitalists to take it over. As there were doubts whether the bounty on construction would be paid if the yard were in the hands of foreigners, the directors, supported by the local authorities, waited on the Minister of Commerce of Paris, and obtained an assurance from him that it would continue to be paid. Nevertheless, negotiations with a Dutch shipbuilding company have fallen through, and at present it looks as if the dockyard, with the five ships and all its equipment, though only five years old, would be broken up. Last year much difficulty was experienced in raising £20,000 to build and run as an ordinary commercial undertaking a steel sailing ship, although the navigation bounty would allow her to sail about the world for some years with empty holds and without actual loss. Ultimately the vessel was completed, but only by raising money on a mortgage on her before she left the stocks. The consul adds that there are signs that an effort will be made before long to encourage the building of steamers in France by a further increase in the navigation bounty.

In the year 1896 French shipbuilding yards received from the public funds, as premiums for ships and machinery built in them, the sum of 4,100,000 francs, while the navigation bounties granted to shipowners in the same period amounted to 9,500,000 francs. In the same year (1896) subsidies totaling up to 25,000,000 francs were paid on behalf of the mail steamers, and the owners of vessels engaged in the fisheries off Newfoundland and Iceland received premiums amounting altogether to 3,000,000 francs; so that the total amount granted in aid of the mercantile marine in 1896 was (in round numbers) about 40,000,000 francs. Since the introduction of this system in the year 1881 no less than 600,000,000 francs have been paid out of the treasury in this way, which is more than the present value of the whole merchant navy of France, and a leading French paper ironically remarked a short time ago that "it would have been far more advantageous for the state to have built the whole mercantile marine on its own account, and to have made a present of it to the ship-owners."

Ten years ago France stood next to Great Britain in respect to the tonnage of her merchant fleet, reckoning only vessels over 100 tons measurement. In the past year, only two steamers of (together) 6,500 tons were on the stocks in French yards, while in German yards 33 steamers, with a total measurement of 63,000 tons, were under construction. Further evidence of the stagnation in the French shipbuilding industry is furnished by the fact that Japan at the time of the war with China purchased 52 British steamers within five months, besides several from Dutch and German owners, while not a single vessel was obtained from France, although it is well known that French yards are capable of turning out very good work. The duty on shipbuilding material has also been very prejudicial to the prosperity of the French shipbuilding industry, but a bill has been recently introduced into the Chamber to remedy this.

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ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,

Incorporated.

GEO. L. SMITH, President.

C. E. RUSKIN,	-	-	-	Manager.
CAPT. JOHN SWAINSON,	-	-	-	Editor.
THOS. WILLIAMS, Chicago,	-	-	-	Associate.

CLEVELAND,	CHICAGO.
Western Reserve Building.	Royal Insurance Building.

SUBSCRIPTION.

One Copy, one year, postage paid,	-	\$2.00
One Copy, one year, to foreign countries,	-	\$3.00
Invariably in advance.		

ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO.,

Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., MARCH 31, 1898.

LAKE shipyards are figuring on the construction of new tonnage and outside of those contracts already placed, there are two, and possibly three more, which are about ready to close.

IT WAS our intention to quote the full particulars this week, of an important shipbuilding contract just closed by the principals of lake shipyards. The embargo has not yet been lifted, therefore, we skip this important contract until another issue of the RECORD.

THERE will be the usual rush in getting steamers to float around carrying cargoes next week, but those who can hold their tonnage, or bottoms, fifteen to twenty days later, will be well advised in doing so. The most experienced and well balanced owners say that April 1st is rather too early to begin the campaign.

THE thanks of the RECORD are due the Hon. Eugene T. Chamberlain, Commissioner of Navigation, for a bound copy of Statistics of Lake Commerce, 1898, prepared by Geo. E. Tunell, of Chicago, under the direction of the Bureau of Statistics, Treasury Department.

THE Hon. T. E. Burton, M. C., Cleveland, O., carried a resolution through Congress requiring the printing of ten thousand copies of Mr. Tunell's report on lake commerce. The report is a valuable one and Mr. Burton is to be congratulated on his successful efforts towards making the country aware of the stupendous growth of lake commerce and the advancement in transportation facilities.

EVERY vessel carrying passengers, while in tow of any steamer, will, in the near future, (the bill having passed the Senate) be compelled to undergo an inspection relative to their equipment, etc. This will affect the excursion traffic where passengers are carried in barges and is a wise provision, as many lives have been lost through an insufficiency of protection on these excursion barges so much in use at several coast ports.

RULE VIII. "Steering and Sailing Rules for the Lakes." "A steam vessel hearing, apparently, not more than four points from right ahead, the fog signal of another vessel, shall at once reduce her speed to bare steerage-way, and navigate with caution until the vessels shall have passed each other."

Rule XV. Every vessel shall, in thick weather, by reason of fog, mist, falling snow, heavy rain-storms, or other causes, go at moderate speed.

PROMINENT lake shipbuilders have been east within the past week though it is not known that any of them brought back contracts from the Secretary of the Navy for torpedo boats or torpedo boat destroyers. This class of bottoms could be taken through the St. Lawrence system of canals with safety. The steam-yacht Comanche, built for and owned by H. M. Hanna, president of the Globe Iron Works Co., is the extreme length that can be taken through the lower canals.

FRACTIONAL PARTS OF TONNAGE.

We noted last week that the government list of merchant vessels of the United States issued from the office of the Commissioner of Navigation, contained a number of vessels of only five tons, and that some of them were thirty years old. This looked a ridiculous feature in the face of the law just promulgated that fractions of tons should be canceled in the measuring of any vessel and that a vessel whose measurements called for 500 $\frac{80}{100}$ tons should be registered as being of only 500 tons, especially as this question of ship measurement is an international one, and where disputed, the ship has to be measured over in a foreign port and pay for the cost of same. Fortunately, however, most of the maritime nations accept American measurements as they do their own, but this feature is only of comparatively recent adaptation, as an officer of the government (and one of the best we could possibly have) the Commissioner of Navigation has no choice in the matter of listing registered tonnage, the law requires the documenting of vessels of even a fraction over five tons regardless of their age, and such must also be included in the List of Merchant Vessels. Now, besides this liability of disputing the measurement of an American vessel in a foreign port, and we are not aware that any dispute has ever arisen, or is ever likely to, where only the fraction of a ton is concerned, even up to $\frac{80}{100}$, yet, unless the proper records are kept as supplemental information by the Treasury Department at the office of the Bureau of Navigation, we are likely to go on adding errors to errors year after year, for, either a ship can be measured accurately or she can not. If the former is the case, let true records be kept and not court confusion in the future by canceling large fractional parts of a ton. In 1855 the United States built 2,027 vessels, now if we take the mean of all fractional parts of a ton and discard only up to the fraction of $\frac{5}{100}$ of a ton on each vessel there is an error of over 1,000 tons perpetrated in one year. In 1891, 1,384 vessels were built, according to the annual report of the Commissioner of Navigation, this gives us nearly 700 tons more, and so on year by year, nor is this the most telling feature of the innovation just established if we consider the frequency of the trips made by steamers compared with the time consumed by a sailing vessel. It is an excellent measure to insist upon the official number and tonnage being stamped or cut on a vessel's main beam, (though the writer has known of an isolated case where a ship built and owned in the United States got clear of even doing that for a period of about seventeen years) nor is there any particular occasion to stamp fractional parts of tonnage, yet, we have suggested, and, on account of this question coming before us again in a different form, do we again mention, that the fairest and most sensible way is to discard the fraction when it is less than half a ton and increase the tonnage by one when the fraction exceeds the half, keeping the exact measurement on record at Washington. One thing is certain, the tonnage given in a ship's register must correspond in all cases with the tonnage marked on her main beam and vice versa, at the same time, the tonnage of the United States mercantile marine should always be accurately known.

THE NEW "RULES OF THE ROAD."

Oh, but the way those pilot rules are hashed about from year to year by the Board of Supervising Inspectors beats all creation. Here is one of the latest:

"Be it resolved, that Section 8, Rule IX, page 68, Rules and Regulations, 1897, be amended by adding thereto an additional paragraph as follows:

"It shall be the duty of all inspectors before granting an original license or renewing an existing one to a master or pilot of steam vessels for any waters, to satisfy themselves by an examination in writing that such officers are thoroughly familiar with the pilot rules upon the waters for which they are licensed."

Now, it should be understood that a candidate voluntarily applies for an examination simply for the reason that he wishes to establish his service, fitness for position desired, etc. The main part of the examination is on piloting and nothing else. Seamanship or navigation, as such, is not required, so that if the candidate is not examined so as to prove his knowledge of the pilot rules upon the waters for which he is or desired to be licensed, in what would the examination consist of? The exact form relative to time, deportment of candidate while undergoing his examination, oral, and, or written, or the state of the pulse of either examiner or examined need not be recorded to prove technical competence, or incompetence. Perhaps the best manner of testing a candidate's knowledge, is by practical questions with models, manipulated by the examiner and kept out of danger by the examined.

Evidently the Supervising Inspectors meant that lake mas-

ters and pilots should be made acquainted with the "Steering and Sailing Rules," the new "Rules of the Road" contained in what is popularly termed the "White Law." If such is the case, and it seems positive that such is the intended application of the clause, it is quite within the bounds of prudence and common sense to require the licensing officers themselves to become thoroughly familiar with the new sailing rules contained in the White Law. Let it be considered that the inspectors have all their lives sailed under the former, and now obsolete code, their knowledge or rather ignorance of the new "Rules of the Road" must be rather mystifying to them. They have never worked under it, clause for clause, never been called upon to show that they fully realized and had completely mastered the manner in which vessels are required to keep clear of each other according to the new code. Let the examiners be thoroughly examined before examining others.

A RIGHTEOUS CREDIT.

Lake shipbuilders and owners have no wish to see wrong impressions created regarding the advancement in shipbuilding and commerce of the lakes, and we take occasion at this time to correct The Engineer, London, who on the authority of a member of the American Society of Naval Architects, states that "Duluth shipped flour to Liverpool last summer for 14½ cents per cwt., and that rails had been coming by the various railroads from Cleveland to tide water bound to Liverpool, also nails and iron rods. During 1897 over 28,000,000 tons passed through the Detroit river, which if placed in 20-ton cars would reach from New York to San Francisco and back. It was a greater commerce than that of Liverpool and London combined. The better class of vessels employed were able to make the coal record .55 ounces per mile, which economies were associated with triple and quadruple-expansion engines, and the increased length of vessels which are now from 475 feet to 520 feet in length. During 1897 three of the steamers built for lake service were each between 4,100 and 4,200 tons, and in addition there were seven sailing and towing barges ranging between 3,180 and 3,800 tons." There is nearly all truth in the foregoing quotation, but we will come back about 45 feet in the length of lake built vessels. The 500 foot limit has not as yet been reached, although it may be shortly.

MISLEADING DIAGRAMS.

We are sorry to see that the Board of Supervising Inspectors of Steamboats have again inserted misleading diagrams in the pamphlet just issued on the pilot rules for the Great Lakes. The several diagrams up to the "sixth and seventh situations," have no point or bearing, they illustrate nothing, nor do they strengthen in any manner the force of the wording of the "Rules of the Road," while the diagrams we have mentioned are wrong, lubberly, illegal and contradictory to the concise and clear wording of the rules. In the sixth situation it is not mandatory for a steamer to port, and in the seventh situation she has the right of way and should not starboard as ordered by the inspectors. If these situations involve imminent danger of collision, and there is no value to the illustrations unless they do, then we call the attention of the Board of Supervising Inspectors and the Hon. O. L. Spaulding, Acting Secretary of the Treasury, who authorized the publication of the nonsensical diagrams, to rule 27, or the qualifying rule, on which rests and is based whatever action may be taken in order to avoid immediate danger. The RECORD had, with charming simplicity, imagined that these graphic delineations of how not to avoid trouble, but do wrong and curse the inspectors, were canceled, and so they were for a time, but as they have been resurrected we again attack them and insist upon a special ruling thereon. Either they are right, and as such must be supported, or they are wrong, and should be canceled, our contention follows the latter view.

REPORTS from all lake ports show the usual active business in fitting out vessels for the season of navigation. Insurance policies go into effect April 1, and vessels loaded with grain for spring delivery will be forced out of port, whether they want to start or not, just as soon as shippers or consignees are persuaded that ice no longer prevents navigation. The majority of vessel owners, especially those who handle their own property, would much rather commence their work May 1 instead of April 1, as the shorter season would mean prompt loading and discharging at better freight rates, however, underwriters, charterers, shippers and consignees have the controlling voice in this question of how and when lake transportation must begin and cease.

THE Weather Bureau undertook a few years ago to enter into a systematic study of the physical laws governing or characteristic of the Great Lakes. The advent of hydrographic offices seemed to conflict with the Weather Bureau work in the several branches of study necessary to pursue in order to evolve and determine advanced theories. There has since then been a certain amount of let go evinced by the Weather Bureau, so that the purely hydrographic work as distinct from that of meteorology, might be taken in hand by the Hydrographic Department and carried out jointly with the Weather Bureau to a successful termination. Now it appears that both branches of these government departments have eased off and we are not likely to know much more of the physical laws ruling these splendid sheets of water than was known a quarter of a century ago.

REFERRING to a decision of the Treasury Department contained in another column of this issue, it may be recognized by lake-farers how susceptible the term pilot is to be misconstrued by those in the coast trade. According to lake phraseology and custom, the officers known as first and second mates on the coast rate as first and second class pilots on the lakes. The second class pilot is being ignored entirely this season and the present decision of Secretary Spaulding will have a tendency to have officers of lake vessels classed as masters, first and second mates. This wording is now used by the officers of the Lake Carriers' Association, although it is well known that the custom and requirements differ from those in use on the rivers, coast and ocean.

AN eminent authority on international law Mr. Frederick R. Coudert, says, and Mr. Robert T. Lincoln supports his views, that international law does not hold a nation responsible for acts of private citizens, citing the assassination of President Carnot, of France, by an Italian subject; and he says that a nation in sending a vessel into a foreign port, assumes all risks of accidents from contact with defensive machinery. A nation is responsible only in failure to warn a visiting captain of dangers.

DISPLACEMENT.

SHEBOYGAN, WIS., March 28, 1898.

Editor of Marine Record.

Having had a controversy with one of my friends on pressure of water I wish you would explain the question in your next issue of the RECORD.

My theory was that the body of a man, when drowned in deep water, would not go to the bottom, but go so far that when the pressure was equal on all sides it would stay in that position. My friend said that the body would go directly to the bottom no matter what the depth of the water was, providing no chemical changes took place during the descent. I wish you would also state what effect it would have on other substances which go down in deep water.

Your contention, if such it may be termed, is correct in the main, as the immersion is equal to the displacement in weight, subject, of course, to the area or surface resistance. In working out a rule by the principles of mechanics on liquid pressure, I find that a square foot of vertical pressure or surface weighing fifteen pounds will sink to a depth of 34.56 feet, therefore, a body weighing 150 pounds would sink 340 feet, or about sixty fathoms, as the pressure at a lower depth would compress the original measurements. A similar surface weighing 180 pounds would remain stationary at seventy fathoms depth.

Without going any further into figures it may be inferred that bodies buried in deep water sink to their weighted depth and there remain in a vertical position, clear of all atmospheric conditions, until other unknown changes set in. An eminent Cleveland gentleman states that experimenting with a weighted body of straw encased in heavy canvas they found after submerging to a depth of about fifty fathoms that the straw was compressed so as to form almost a solid body. In a word, when a solid floats in a fluid the weight of the solid is equal to the weight of the fluid displaced.—ED.

KEEPER OF A LIFE-SAVING STATION CENSURED.

Supt. S. I. Kimball, of the Life-Saving Service at Washington, has written to Capt. Persons, in charge of the Thunder Bay Island life-saving station, censuring him for his failure to act in connection with the steamers Miami and Egyptian, last fall. Keeper Persons was charged with neglect to respond to signals of the steamer Miami on the night of October 24th last, and failing to go to the aid of the steamer Egyptian, burned on the night of December 1st.

He claimed that the signals of the Miami were not for

assistance, and that no aid from the life-saving service was needed by the Egyptian, which he could see with vessels standing by her. No adverse results ensued, but it is held by Supt. Kimball that he should have gone out in both instances. All doubts must be dissolved by action.

DISPLAY OF WIND SIGNALS.

U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU,
CLEVELAND, OHIO, March 30th, 1898.

The display of wind signals on Lakes Pepin, Michigan, Huron, Erie and Ontario, will be resumed on April 1st, 1898.
E. A. BEALS,
Inspector, Weather Bureau.

BUFFALO GRAIN HANDLING CHARGES AMICABLY ARRANGED.

THE LAKE CARRIERS' ASSOCIATION AND THEIR STEVEDORE.
W. J. CONNORS, ALSO MANAGERS OF THE GRAIN
ELEVATORS MAKE MUTUAL CONCESSIONS.

When a reduction of the Buffalo grain handling charges were made by the Lake Carriers' Association and W. J. Connors in Detroit last January it was fully understood that labor was not to lose by the agreement, in other words, the grain shovellers were to be paid as in the previous year.

On the near approach of the opening of navigation it was found that considerable friction existed at Buffalo between the parties interested and that it was necessary to make concessions all round. With this end in view the executive committee of the Lake Carriers' Association gave instructions to H. D. Goulder, Esq., counsel for the association, to proceed to Buffalo and if possible adjust the matter, having special reference to the shovellers' pay, and see that no reduction was made in that direction. Mr. Connors entered heartily into this project and reduced his charge from ten cents to five cents on each thousand bushels of grain discharged; the Lake Carriers' Association advanced their rate fifteen cents per thousand and the elevators reduced charges for steam shoveling fifteen cents, making the rate \$1.20 per thousand bushels or fifteen cents less than last season.

These changes in prices leave matters so that W. J. Connors may carry out his contract with the association. It will make his rate \$3.10 per 1,000 bushels for discharging vessels instead of \$2.95 as he bid at Detroit. Of this amount he will pay \$1.85 to the men for shoveling, \$1.20 for the use of steam shovels, leaving 5 cents per 1,000 bushels to pay for his services instead of ten cents, the sum he intended to charge after signing the contract to do the work.

ICE REPORTS.

As to condition of ice in the Great Lakes, with reference to resumption of navigation, the following special reports were made by Weather Bureau officials, under instructions from Willis L. Moore, Chief of Bureau, on the afternoon of Saturday, March 26th, 1898:

BUFFALO, N. Y.—Lake and harbor free from ice, with the exception of a small field west of Point Abino on the Canadian side. Steamer Zenith City cleared for Lorain, Ohio, afternoon of 25th. Navigation could be conducted safely, but all transportation companies appear to be waiting until April 1, when marine insurance goes into effect.

CLEVELAND, OHIO.—Local navigation has not been interrupted during the week. The Detroit passenger boat is running on schedule time, and two large freight steamers have arrived from Ashtabula to be fitted out. It is expected that the fleets owned here will nearly all be put in commission between the 10th and 20th of April.

PORT HURON, MICH.—No ice in this vicinity. Navigation on Lake Huron and St. Clair river has opened; but very few boats are in commission yet.

CHICAGO, ILL.—Navigation on Lake Michigan continues uninterrupted by ice. In the Straits of Mackinac ice remains in about the same position as noted in previous report, but is wearing slowly away. The present outlook is that the Straits will be open for navigation April 1.

GRAND HAVEN, MICH.—There is no ice in this vicinity, either in the harbor or Lake Michigan. The conditions have continued decidedly favorable during the week for an early resumption of navigation, about April 1.

MILWAUKEE, WIS.—River and harbor entirely free from ice, and navigation to points on Lake Michigan continues. Advices received by vesselmen this morning state that ice in Mackinac Straits is broken and has gorged at the western entrance. It is stated that a northeast wind would clear the Straits.

DULUTH, MINN.—There is not sufficient ice here to hinder navigation; that in the harbor is soft and is fast decreasing; there is none in the lake at this point. Local navigation has begun; the resumption of general navigation depends entirely upon the conditions below Sault Ste. Marie.

The following special telegram was received at Washington from the Weather Bureau official at Milwaukee, March 29:

Latest advices state that east end of Mackinac Straits is open, but west end is still closed by floating ice; northeast winds needed to clear Straits.

FLOTSAM, JETSAM AND LAGAN.

Mr. W. F. Cloney, of St. Catharines, has been appointed to the position of traveling passenger agent for the Richelieu and Ontario Navigation Co.

It is reported that four vessel charters for Duluth wheat have been made at about 2 cents with the option of sending the boats either to Chicago or Buffalo.

The extension to the Missabe ore dock on St. Louis Bay will be finished in about ten days. It will be ready for operation as soon as it is likely to be required. The new ore dock at Two Harbors will be ready for use May 1.

Another big lumber sale was recently made at Duluth, to go east at the opening of navigation. The amount was 5,000,000 feet. The Duluth stocks of unsold lumber are beginning to melt away. Recent sales have amounted in the aggregate to 13,600,000 feet.

It is expected that the steamers running in connection with the Merchants' Line will be placed on the same routes as last summer. The Cuba and Melbourne will run between Montreal, Toronto and Cleveland; the Michigan, between Montreal, Toronto and Duluth, and the Tilley and Arabian, between Duluth and Prescott.

To what base uses, etc.—It is now reported that the masters of the Bessemer fleet of iron ore drogers have all been notified that they will wear uniforms and caps this season. The color chosen for the uniforms is blue. Sky blue or marine blue, we presume. They should also be solicited to wear a Sunday suit of sea green, for a change.

The Pintsch gas buoys in use by the different governments throughout the world now aggregate 800. The constant and rapid extension of the use of Pintsch buoys by the European governments as well as our own, speaks louder than anything we could say in telling of their superior value as aids to navigation, for it is a proof that in service they prove to be all that is claimed for them.

The feeling among the owners of the smaller class of boats is gloomy. They cannot see how it is possible to operate their vessels at the freights now offered without facing a positive loss. All projects for bringing vessel-owners into a combination which should control freight charges have been given up. The season promises to be memorable in the extension of the influence of vast corporate wealth as opposed to individual vessel-owners.

Captain McDougall general manager of the American Steel Barge Co., W. Superior, Wis., certainly chases himself around a great deal. The Superior Inter Ocean says in a recent issue: Captain McDougall is undoubtedly the busiest man in this neck of the woods. He has been traveling a good deal since the first of the year, having spent 33 nights on a sleeping car between Jan. 10th and Feb. 25th. He has covered a wide territory too, having been from one coast to the other.

The new steel steamer William R. Linn, the largest grain carrying boat on the lakes, was launched March 5. With the present draft of water she will carry 6,000 tons, and with the completion of the 20-foot channel the capacity will be increased another 1,000 tons. The dimensions of the boat are: Length over all, 420 feet; keel, 400 feet; beam, 48 feet; depth, 28 feet; water bottom, 4½ feet. She was named after the well-known grain dealer and Board of Trade man of Chicago, William R. Linn.

Last season witnessed some very large grain cargoes carried by lake vessels. The cargoes were all delivered at Buffalo elevators. The record for the greatest tonnage is held by the Crescent City, which carried 224,940 bushels of corn, or 6,298 tons, 640 pounds. The greatest number of bushels was carried by the Queen City, which delivered at Buffalo 331,253 bushels of oats, or 5,300 tons. The Empire City carried the largest cargo of wheat, having on board 205,360 bushels, or 6,160 tons, 1,600 pounds.

The water in Lake Ontario is at present deeper than it has been known at this time for many years back. If it keeps up as it is now there will be plenty of water in the lower canals, and steamers will be able to load to their full depth. At the head of Lake Superior, however, the water is said to be twenty inches lower than it was in August last, and it has not been so low before in many years. At Sault Ste. Marie, too, the water is twelve inches lower than it was this time last year, which means a great deal to large carriers.

Frank R. Manton, agent American Ship Windlaas Co., Providence, R. I., in a letter to the MARINE RECORD says: "We are full to overflowing with work and are running until eight o'clock nights, trying to catch up with our orders, which consists of outfits for steamers, steam capstans for boats building and fitting out all over the Pacific slope for the Klondike, and windlasses and capstans for a majority of the coast and lake shipyards, also steam towing machines for all parts of the continent, including British Columbia. We have manufactured and sold fifteen steam towing machines since November last."

Lake navigation will open on April 1, the beginning of marine insurance. If that day did not come on Friday a large fleet would sail then, but because of sailors' superstitions a larger part of the boats probably will not leave until the morning of April 2, soon after midnight. The winter grain fleet at Chicago and South Chicago numbers 138 vessels and have on board 12,086,000 bushels of grain. The fleet will probably hold by the opening of navigation fully 13,000,000 bushels. Charters have run from 3 cents a bushel at the beginning of the winter to 1½ cents, the rate now prevailing. Ice reports from all lake points are to the effect that navigation will open fully two weeks earlier than usual. There is no ice to speak of in Lake Superior, and it is rapidly leaving the channels between Lake Huron and Lake Erie. Under existing conditions Lake Superior navigation will be open the first week in April.

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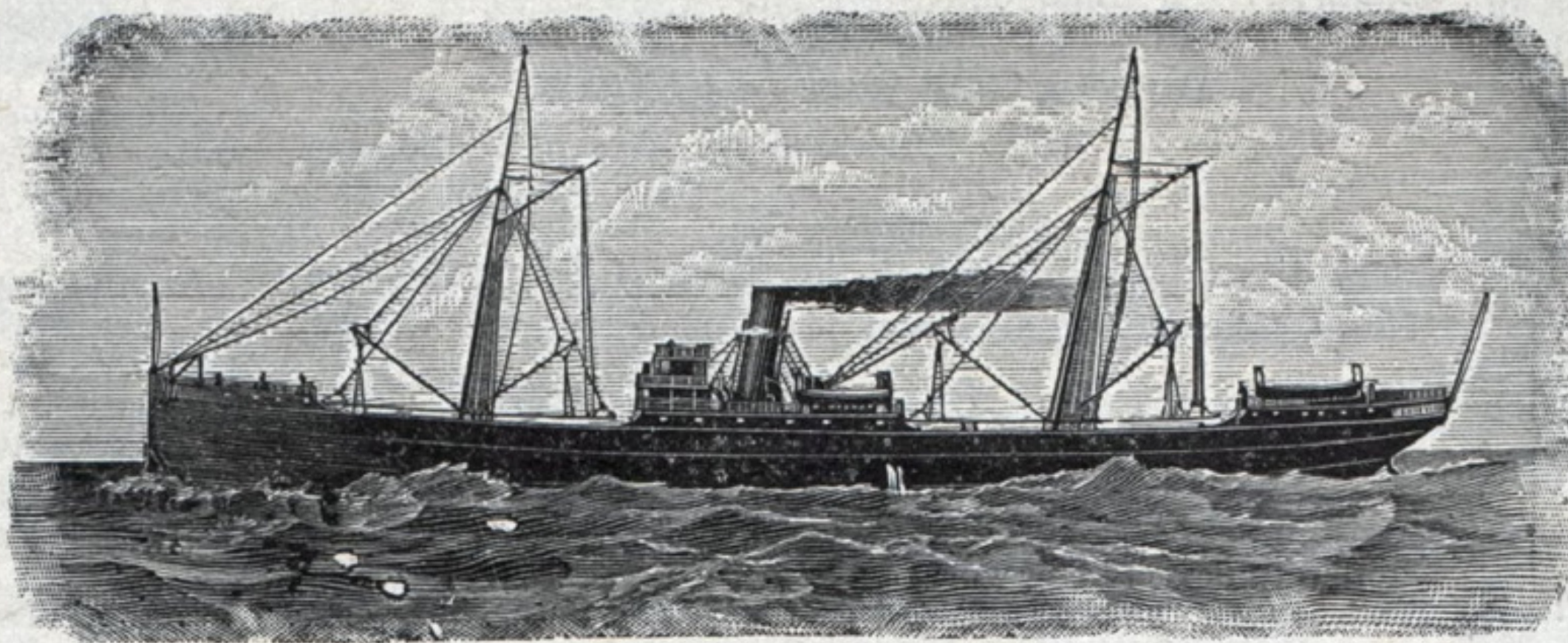
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57 WADE BUILDING. CLEVELAND, OHIO.

THE LAUNCHING OF TWO U. S. BATTLESHIPS.

There was a successful launch on Thursday, March 24 of the two U. S. battleships, Kearsarge and Kentucky, from the yards of their builders, the Newport News Shipbuilding and Drydock Co., Newport News, Va.

The Kearsarge and Kentucky are first-class battleships of the heavy armored type, primarily intended for coast defense, but capable of extended sea duty in case of offensive operations. They were authorized by act of Congress March 2, 1895, and the contract for their construction was signed on January 2, 1896. Each is to cost \$2,250,000, exclusive of armor and armament. The contractors guarantee a speed of sixteen knots, at a mean draught of twenty-three feet six inches, to be maintained for four consecutive hours, with a penalty of \$100,000 for every knot they fall below sixteen, and if their speed is below fifteen knots the government has the option of rejecting the vessels or accepting them at a reduced price. There is no premium for excess of speed over contract requirements. The vessels to be built entirely of domestic materials. Their general dimensions are: Length on load water line, 363 feet. Beam, extreme, seventy-two feet five inches. Draft, on normal displacement, twenty-three feet six inches. Normal displacement, 11,525 tons. Maximum displacement, all ammunition and stores on board, 12,325 tons. Maximum indicated horsepower, (estimated) 10,000. Maximum speed, required by contract, sixteen knots.

Each ship is to carry four 13-inch and four 8-inch breech-loading rifles, mounted in double turrets; fourteen 5-inch rapid fire rifles, twenty 6-pounders, six 1-pounders; four Colt machine guns, two boat guns and four torpedo tubes.

Their 13-inch rifles carry a charge of 550 pounds of brown powder with a 1,100 pound projectile, and have a life of about 200 rounds. They are forty feet long and weigh about sixty tons each.

THE RATING OF NAVAL VESSELS.

RECLASSIFICATION OF NAVAL VESSELS.—A bill for the reclassification of naval vessels was introduced in the House of Representatives on March 8th. It provides for the amendment of sections 1529 and 1530 of chapter six, title fifteen, of the Revised Statutes of the United States, so as to read as follows:

SEC. 1529. Vessels of the Navy of the United States, ex-

cept torpedo boats and other special vessels, shall be divided into four classes, and shall be commanded as nearly as may be as follows: First and second rates by captains; second and third rates by commanders; fourth rates by lieutenant-commanders and lieutenants; torpedo boats and other unclassified vessels by officers below the grade of lieutenant-commander.

SEC. 1530. Vessels of five thousand tons displacement or more shall be classed as first rates; those of three thousand tons or more and below five thousand tons as second rates; those of one thousand tons or more and below three thousand tons, as third rates; those of less than one thousand tons, as fourth rates.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	585,000	686,000	84,000	50,000	192,000
Chicago	6,650,000	17,147,000	1,317,000	742,000	343,000
Detroit	700,000	23,000	13,000	18,000	2,000
Duluth and Superior	3,293,000	3,196,000	2,903,000	1,365,000	593,000
Milwaukee	109,000	104,000	87,000	94,000	9,000
Montreal	96,000	60,000	1,045,000	43,000	39,000
Oswego .....	.....	.....	.....	.....	.....
Toledo	244,000	1,065,000	264,000	15,000	.....
Toronto	26,000	.....	21,000	.....	11,000
On Canal .....	.....	.....	46,000	.....	.....
Grand Total	30,061,000	43,382,000	11,636,000	3,265,000	1,517,000
Corresponding Date, 1897	39,023,000	25,152,000	13,796,000	3,705,000	3,165,000
Decrease	1,356,000	6,000	668,000	26,000	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

CAPTAIN GEORGE McDougall.

John A. Copeland, in his sketches of "Prominent Men of the Great Lakes," in the Toronto Sunday Globe, says the following of Capt. McDougall, formerly of Sarnia:

Capt. George McDougall is another able navigator whose ability has found him high promotion. He is in the employ of the C. P. R. Company's line of steamboats and commands the Athabasca. He was born in Owen Sound, Ont., in June, 1849. His career afloat began in earnest when he was fifteen years of age. He shipped as first porter on the

steamer Clifton, in the passenger and freight business between Collingwood and Owen Sound. During 1865 and 1866 he was aboard the steamer Waubauna, the ill-fated vessel at whose foundering later so many lives were lost. The Captain's next position was that of steward on the Francis Smith, where he remained for two years, 1867 and 1868. In 1869 he first shipped before the mast, some of the vessels which he served in during that season being the schooner Clyde, the schooner Mary Taylor and the schooner Northumberland. In 1870 he became first mate of the schooner Mountaineer. Throughout 1871 and 1872 he occupied a similar post on the schooner Belle McPhee, and in 1873 he secured the position of master on the schooner Mountaineer, which, previously, he had sailed in as mate. In 1876 he had charge of the steamer Vanderbilt. Then for three years he was master of the schooner Phoebe Catharine, and for three years more commanded the schooner Otonabee. In 1883 he again took charge of a steam vessel, going as master into the Scotia. Then he had command of the steamer Wolseley, subsequently the steamer Kincardine, the steamer Ontario, the steamer United Empire, and finally the C. P. R. steamer Athabasca. Before he went into the employ of the C. P. R., in 1892, Capt. McDougall had been with the Sarnia line for four years.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT.
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DISTRICT.
CHICAGO, ILL., March 26th, 1898.

Notice is hereby given that a third class can buoy, painted black, has been established in twelve feet of water on the south-west end of a shoal at the entrance to the harbor of St. Joseph, Michigan.

By order of the Light-House Board.

C. O. ALLIBONE,
Lieut. Commander, U. S. N., Insp. 9th L. H. Dist.

She threw the fellow overboard,
And never saw him more—
She thought he would swim back to her,
But instead he swam ashore.
—Detroit Journal.

"One science only can one mortal fit,
So vast is art, so shallow human wit."

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, report the following condition of the eastern freight market:

The week under review began with brisk enquiry for grain tonnage in every direction, and it looked at one time as if the list of available vessels being practically exhausted, we were on the eve of another turn for the better in freights. The enquiry, however, has not been maintained. Charterers are less urgent, and, under the freer offering of tonnage, rates have barely held their own at 3s. 6d. for April, and 3s. 4½d. for early May boats to Cork f. o. The principal demand has been for April loading for Danish ports, and several large steamers closed in that direction, carrying rates to Copenhagen down to 3s. 3¼d. Similar tonnage for picked ports in the U K. or on the Continent, with privilege of portion of general cargo, has been fixed at from 2s. 10½d. @ 3s. 3d. per quarter—top rate being now barely obtainable. Some further boats have been placed under time charter for Trans-Atlantic trade, but could only be disposed of at a concession in rates. Other trades show little demand for tonnage, and, in view of the very light enquiry at the cotton ports, it appears not unlikely that owners of tonnage convenient to the Gulf will, ere very long, have to yield to some concession in order to secure timber from these ports.

Our market for sale tonnage continues very firm, but without material change. The only feature worth recording is an increased demand for white pine tonnage from Eastern ports to South America, and rates in this line seem to be stiffening. In all other directions there is nothing new, although we may mention that in consequence of a scarcity in naval stores in Southern ports and the consequently enhanced prices demanded by owners, the demand for near-by vessels has momentarily ceased in that quarter.

CANADIAN STEAMBOAT INSPECTION.

His Excellency in virtue of the provisions of the 2nd Section of the Act 55-56 Vic., chapter 19, entitled "An Act further to amend the Steamboat Inspection Act," and by and with the advice of the Queen's Privy Council for Canada, is pleased to order and direct that the provisions of chapter 78 of the Revised Statutes, "The Steamboat Inspection Act," and the amendments thereto, together with the Canadian rules and regulations relating to the inspection of steamboats, shall apply to passenger steamboats—other than steamboats holding passenger certificates from Her Majesty's Board of Trade—registered elsewhere than in Canada, engaged in carrying passengers to or from any port or place in

Canada, to or from any port or place out of Canada, or from one port or place in Canada, to another port or place in Canada, or on any of the lakes, rivers or sea-coasts of Canada; provided, however, that the provisions of the said Act and the amendments thereto which require Canadian passenger steamboats to carry Canadian certificated engineers, be not applied, and that the Canadian rules and regulations relating to the inspection of boilers while in course of construction, be not applied, and that the boilers of such steamboats be deemed to have been inspected by a Canadian Steamboat Inspector, while in course of construction, and that the affidavit of the boiler maker, required by the rules and regulations be dispensed with.

His Excellency is further pleased to order that the rules and regulations relating to the inspection of safety valves be not applied, and that the safety valves of the boilers of such steamboats be passed, if the inspector is satisfied that they are in good reliable working order and of sufficient dimensions to discharge all the surplus steam the boilers can generate beyond the working pressure allowed, when under full fires and engine stopped, and provided that the inspector considers the construction of the valves to be such as will insure safety.

JOHN J. MCGEE,
Clerk of the Privy Council.

TONAWANDA LUMBER HANDLING RATES.

The Tonawanda lumber handlers, including both the lumber shovers and the lumber associations, have come to an agreement regarding rates for handling all kinds of lumber at that port this year. The compact will take effect April 1. The rates are as follows:

For unloading pine lumber from barges or steamers of 12½ feet in depth of hold or less, government register, charges will be made as follows: Twenty-two cents for each 1,000 feet from the opening of navigation to October 1, and 24 cents for balance of season after Oct. 1; hemlock, 25 cents for each 1,000 feet from the opening of navigation to October 1, and 27 cents for each 1,000 feet for the balance of the season after October 1; birch, maple and ash lumber, for the season, 35 cents for each 1,000 feet; oak, 40 cents for each 1,000 feet; elm, 26 cents for each 1,000 feet for the entire season.

Lath will be unloaded at the rate of 5,000 to 1,000 feet of pine lumber.

Shingles, 18, at the rate of 6,000 to 1,000 feet of pine lumber.

Bill timber, larger than 9x12x18 feet (deckload), 30 cents for each 1,000 feet.

Bill timber larger than 3x12x18 feet, (full cargo), 35 cents

for each 1,000 feet.

Bill timber larger than 3x12x18 feet, (hold full), 40 cents for each 1,000 feet.

Barges leaving deckload in Buffalo or elsewhere will be charged 3 cents more for each 1,000 feet than full cargo rate.

Barges unloading deckload only will be charged 3 cents for each 1,000 feet less than the regular cargo rates.

For unloading regular cedar posts, round, ⅞ cent each; split posts, ½ cent each; regular cedar railroad ties, 1¼ cents each; cedar trolley ties, ⅞ cent each; grape poles, 5 inches and smaller at butt, ½ cent each.

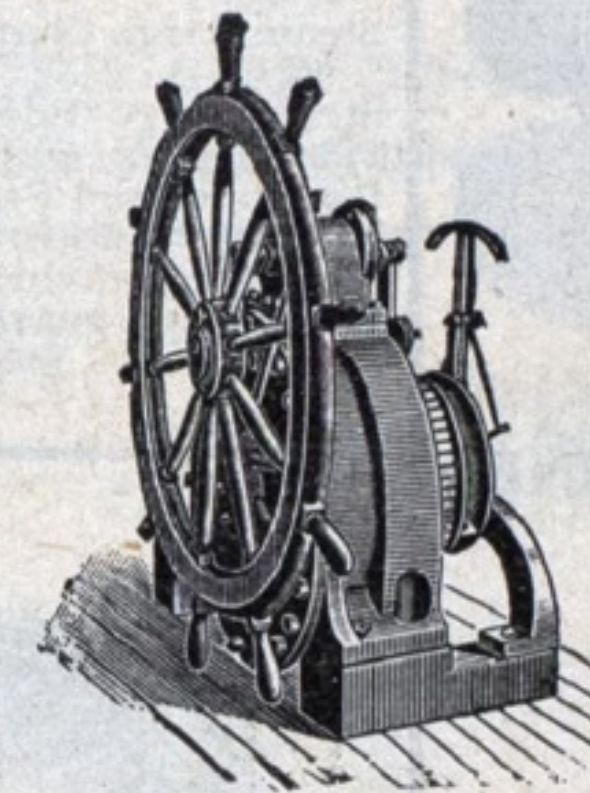
Barges containing over 50,000 feet of shorts will be charged 15 cents for each 1,000 feet extra on the amount of shorts in excess of 50,000 feet.

For unloading steamers or barges of over twelve and one-half feet depth of hold, \$5 extra will be charged for each additional six inches or fraction thereof.

PROPOSALS.

U. S. ENGINEER OFFICE, Duluth, Minn., March 10, 1898. Sealed proposals for building Concrete Footing Blocks for superstructure for south pier, Duluth ship canal, will be received here until noon, April 11, 1898, and then publicly opened. Information furnished on application. Clinton B. Sears, Major, Engrs. II-14

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CAPITAL, Paid up in Cash,	-	-	-	-	\$3,000,000.00
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T. HOUARD WRIGHT, Marine Secretary.

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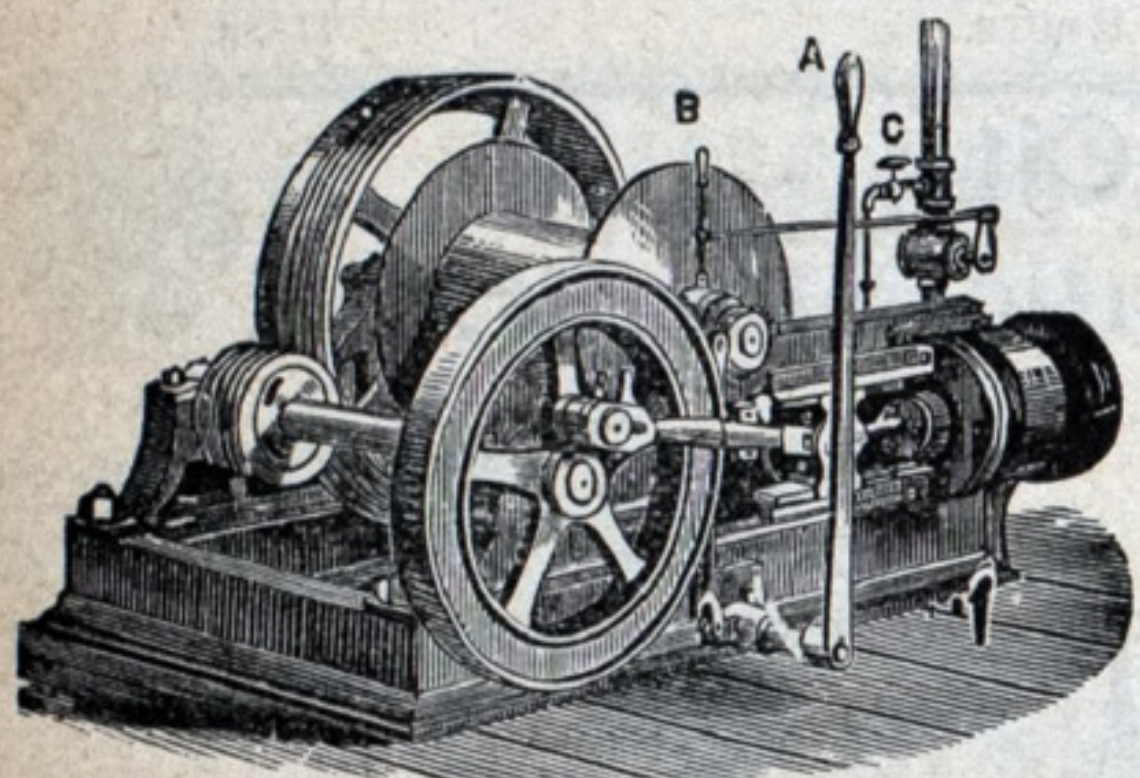
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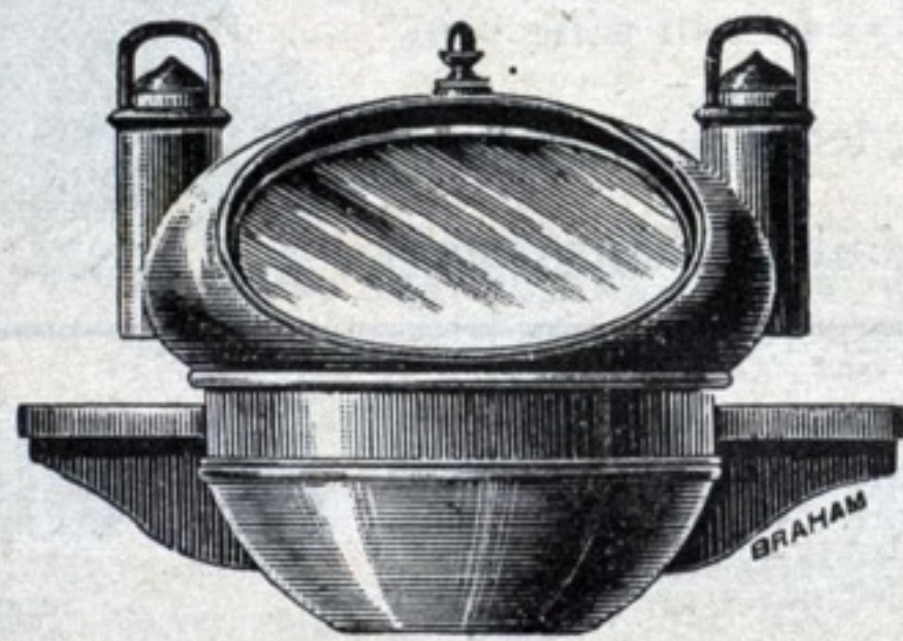
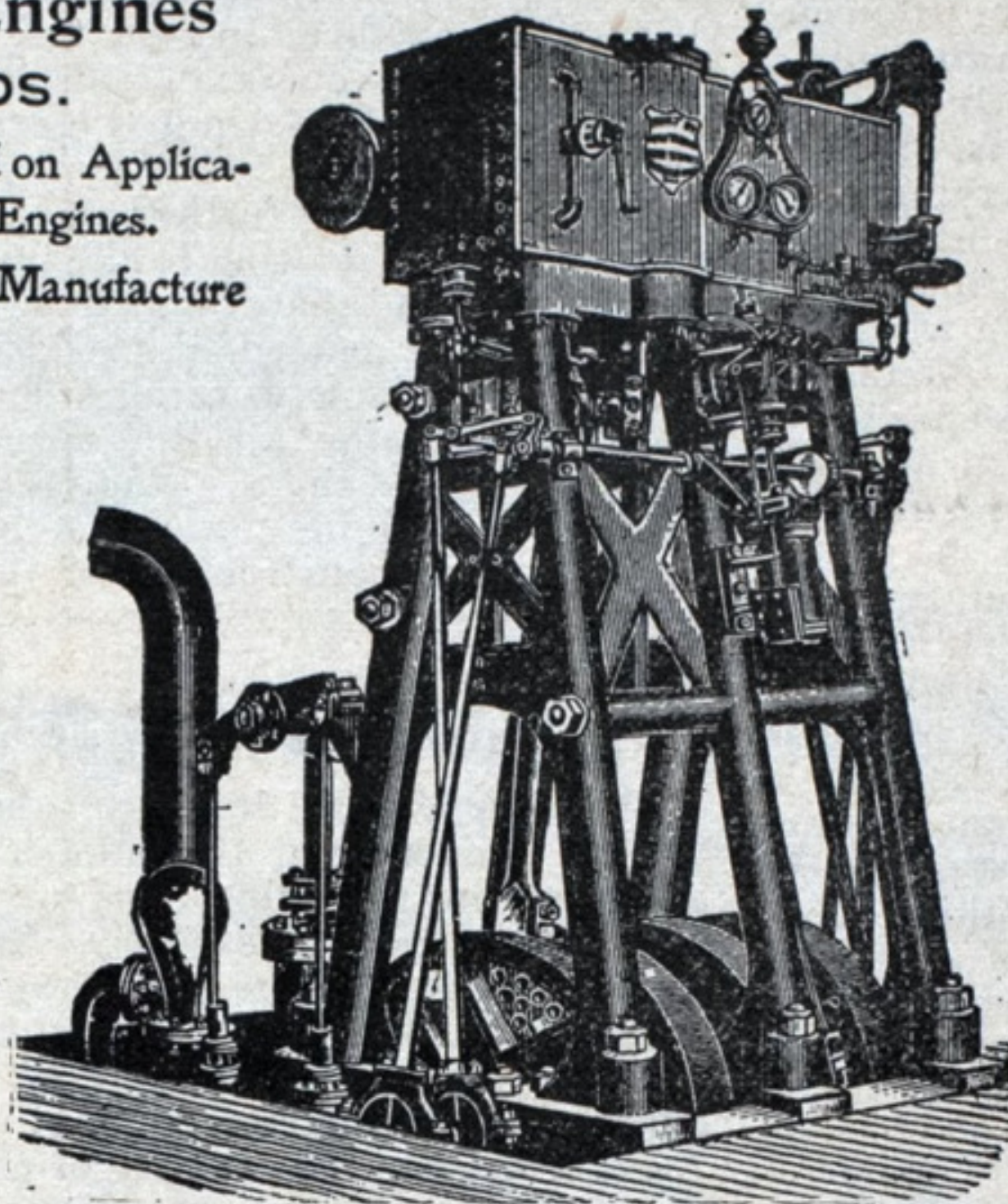
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 Steam Barge Luella H. Worthington, Cedar River, 19 and 36x30.
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 Tug E. G. Crosby, Muskegon, 16 and 30x24.
 Tug Peter Coates, Sault Ste. Marie, 10 and 20x16.
 Steamer Lorain L., South Haven, 12 and 21x16.
 Passenger Steamer Lotus, Escanaba, 16 and 30x24
 Steam Barge Sachem, Grand Haven, 21 and 38x36
 Passenger Steamer Bon Ami, Saugatuck, 14 and 28x20.
 Steam Barge Charles A. Street, Chicago, 20 and 36x36.
 Steam Barge Edward Buckley, Manistee, 18 and 36x30.
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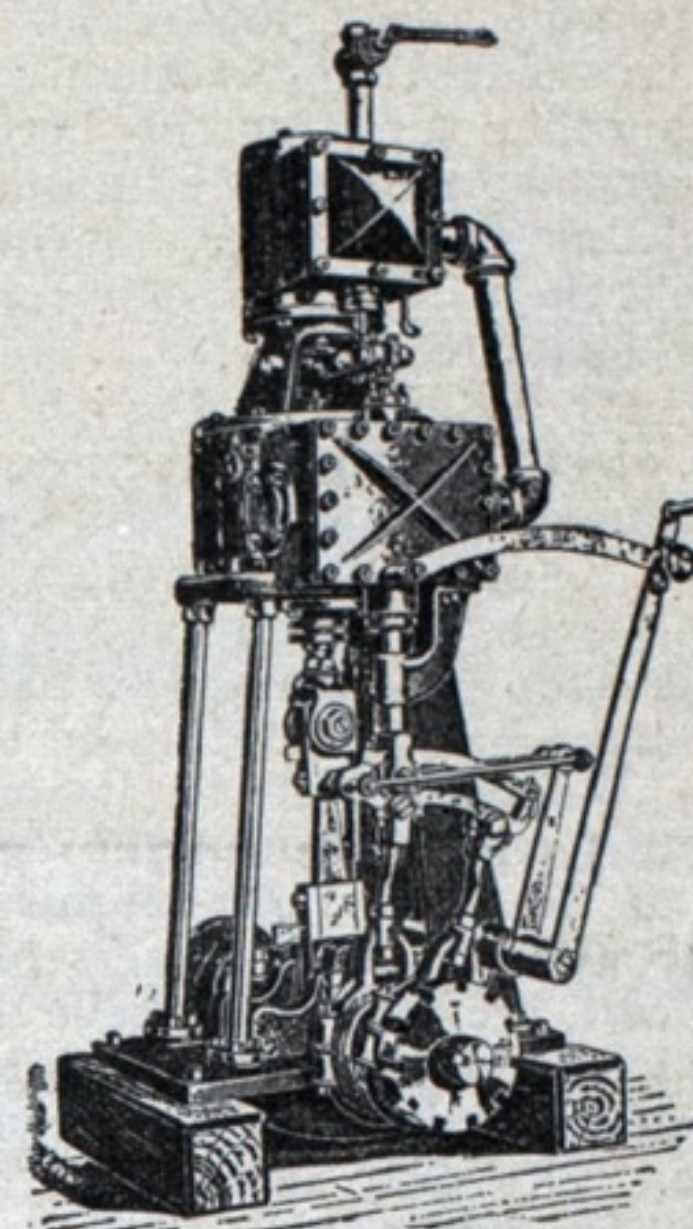
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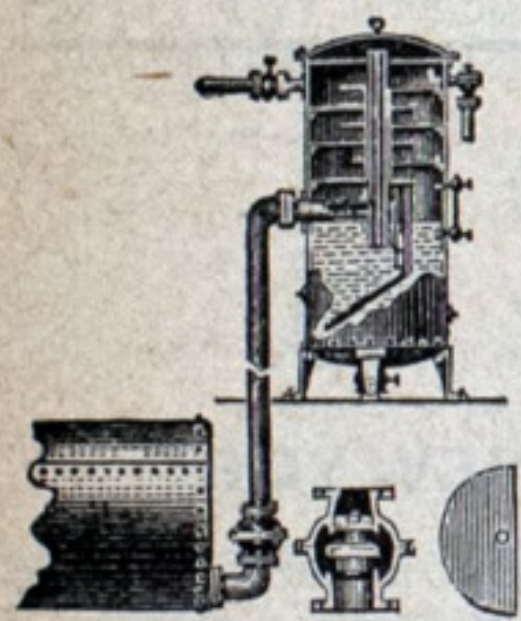
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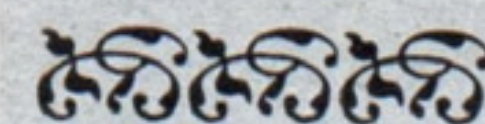
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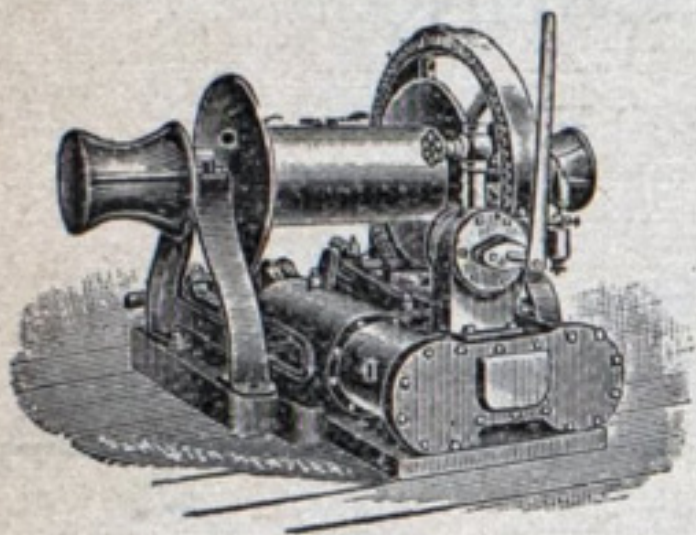
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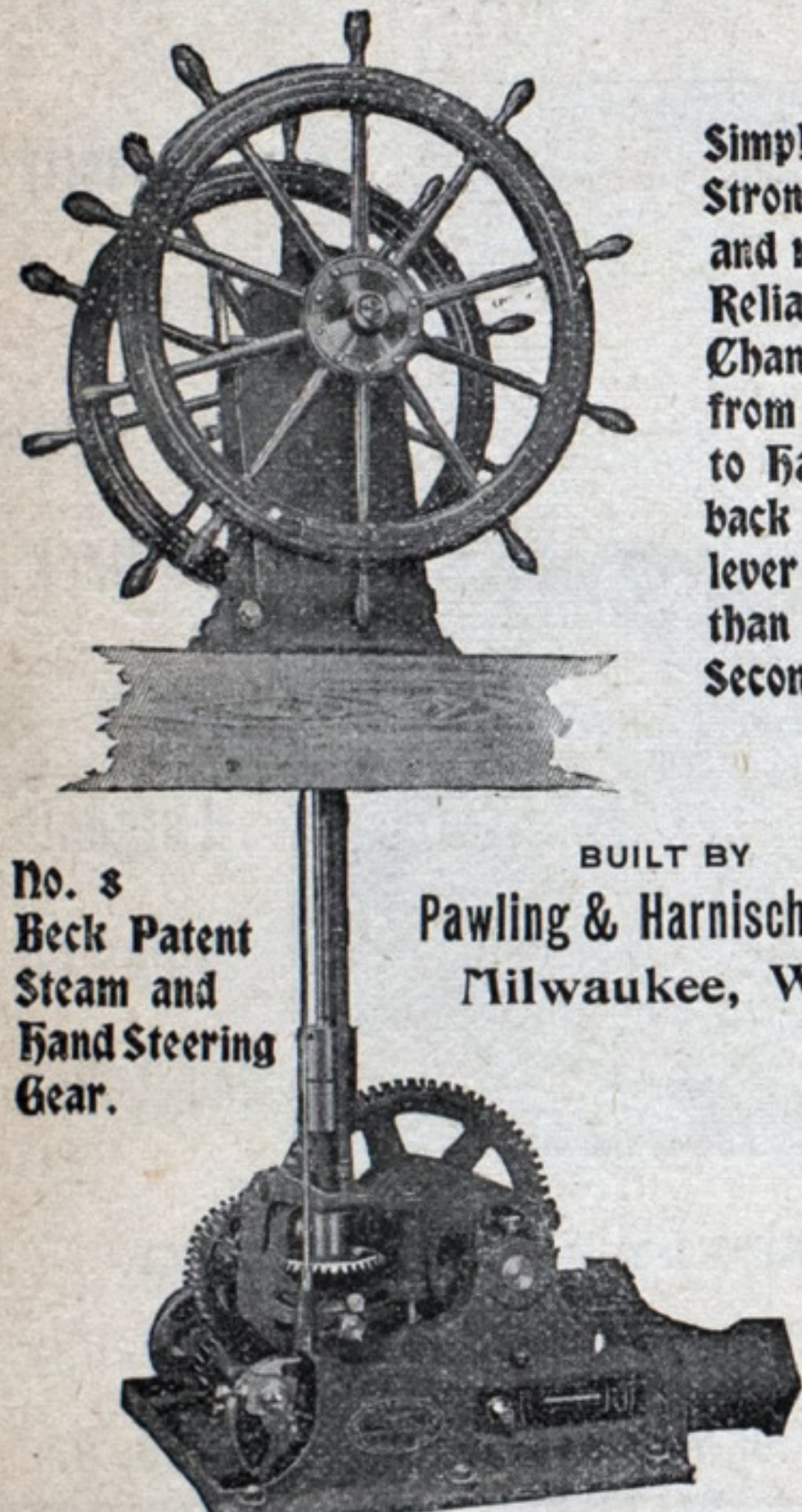
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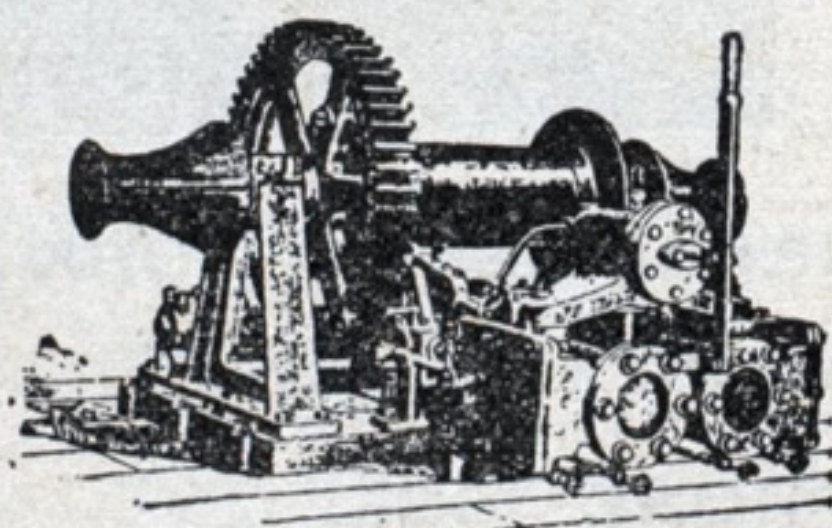
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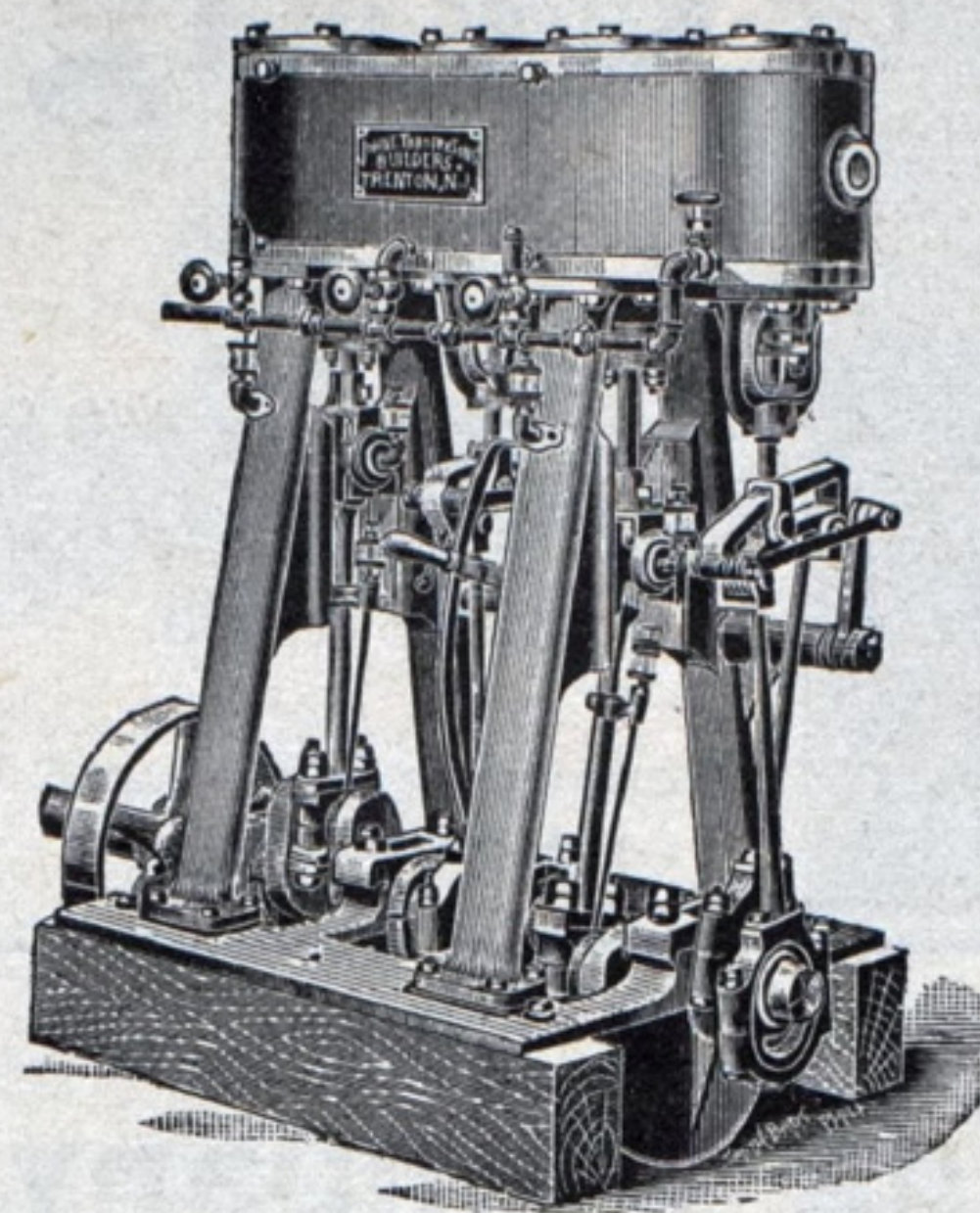
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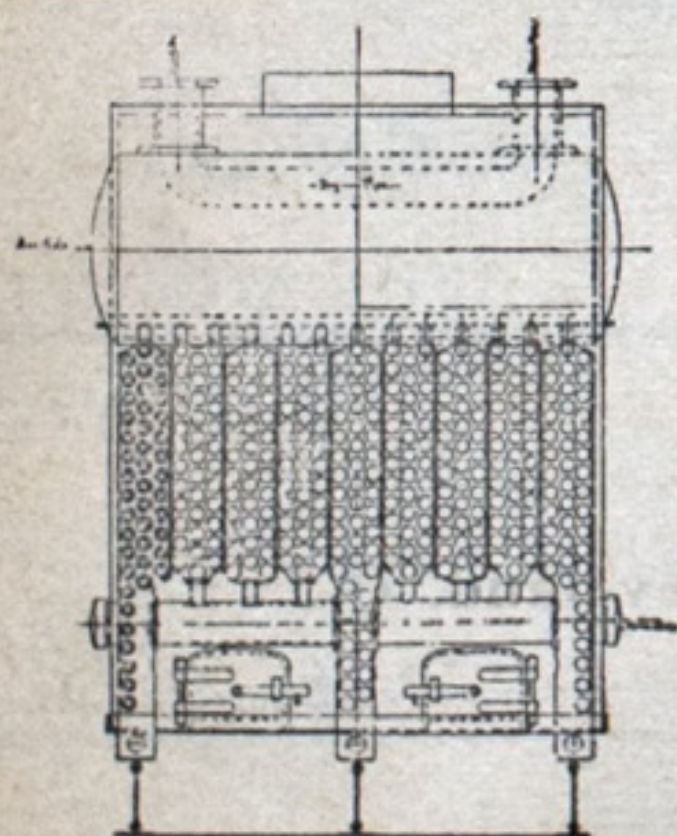
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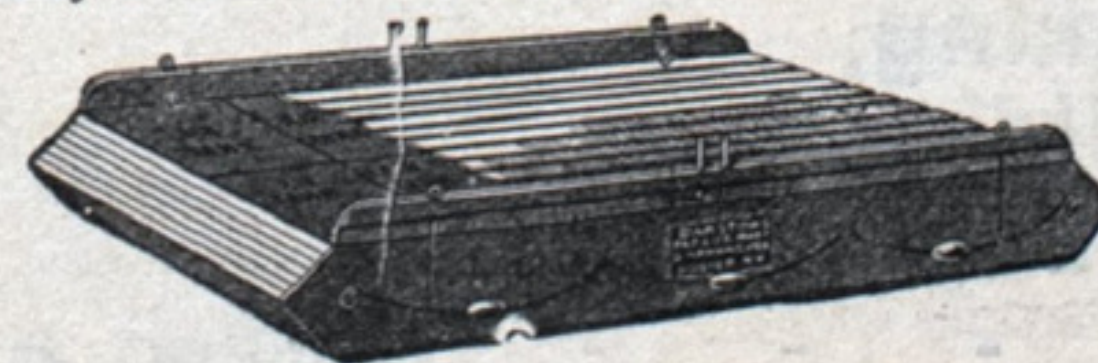
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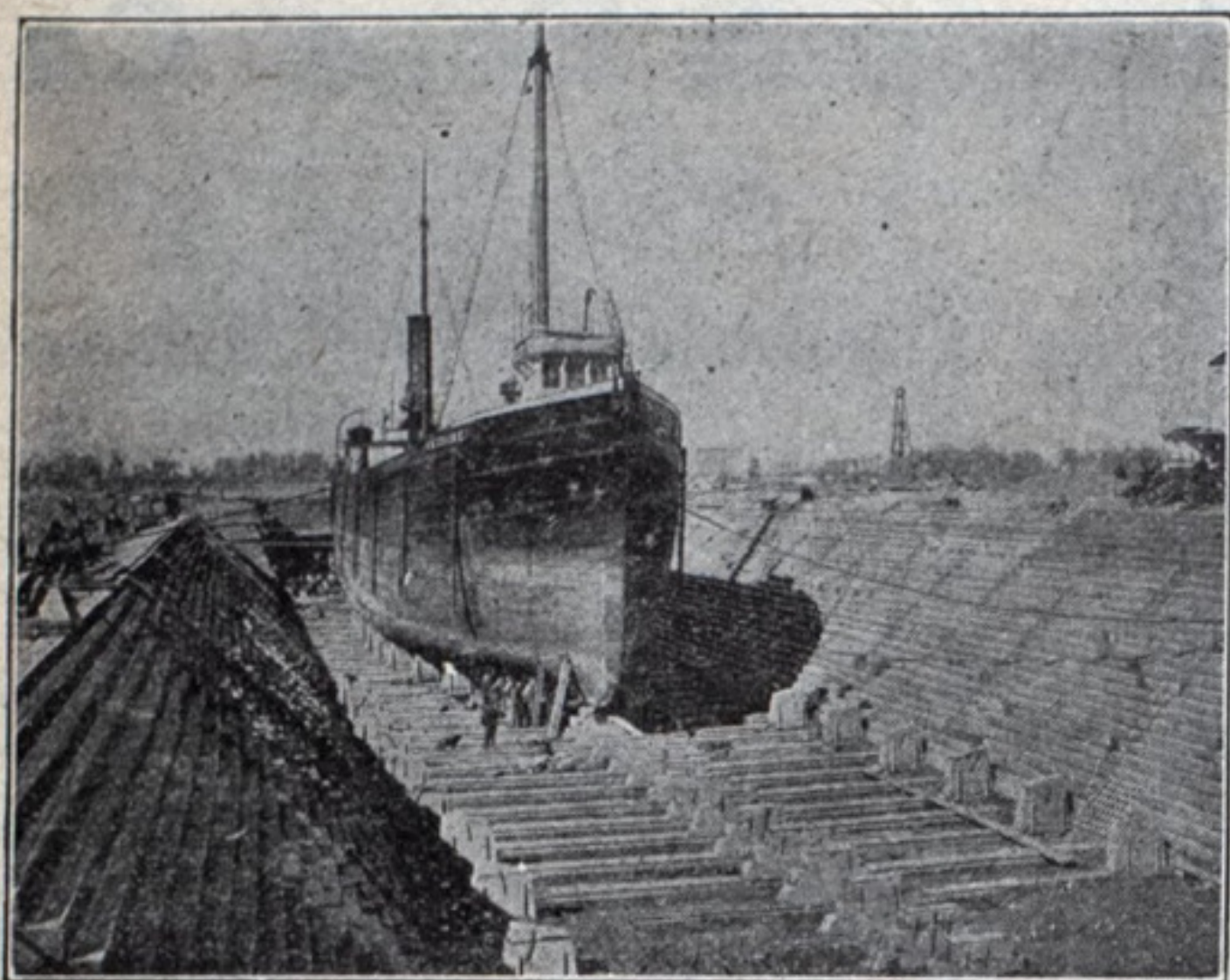


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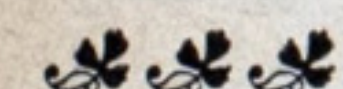
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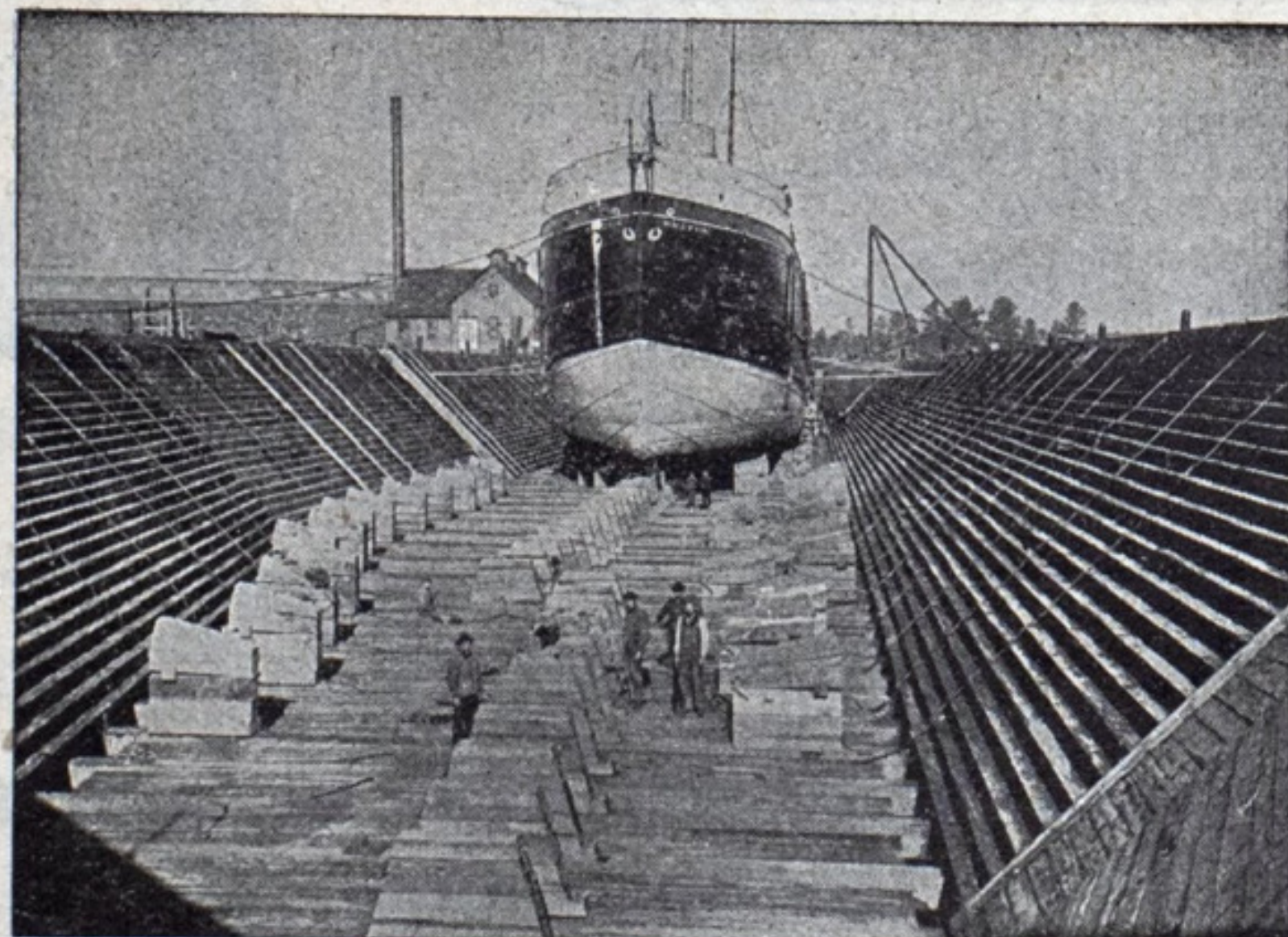
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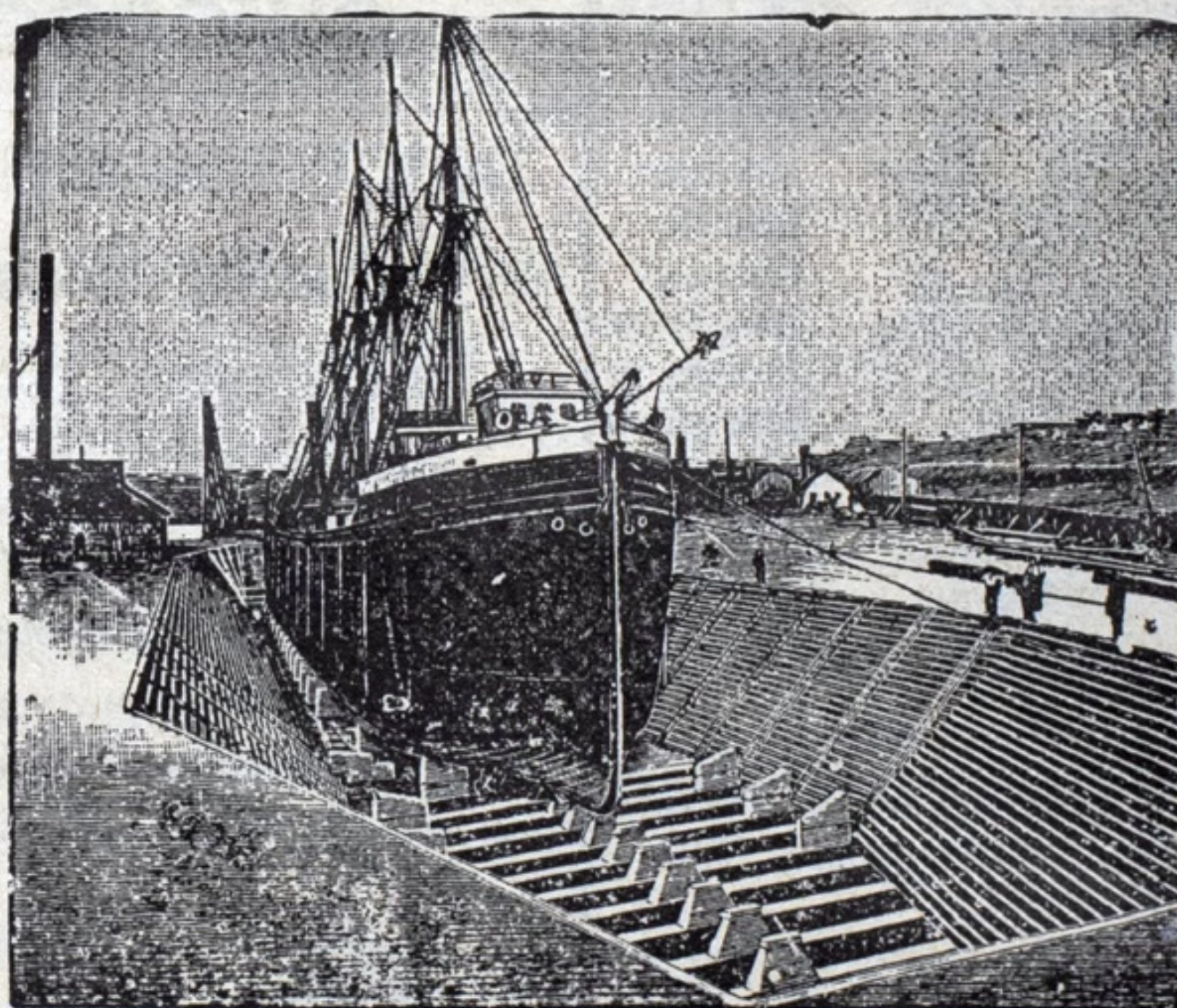
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